Inverse systems in indigenous languages of the Americas

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Foreword

> And a man should not abandon his work, even if he cannot achieve it in full perfection; because in all work there may be imperfection, even as in all fire there is smoke.
> — *Bhagavad Gītā* 18.48

Some dissertations are the kind of book you read once and then put aside because they have nothing more to tell you. Others are works you return to time and again because you keep finding new details or rediscovering old insights. A number of dissertations in descriptive linguistics are invaluable reference works since they are the first, the best, or even the only, grammar of a language. I believe the present book to belong to none of these categories.

That this logbook is a doctoral dissertation in theoretical linguistics written at the beginning of the third millennium justifies the citations, footnotes, and other textual and metatextual paraphernalia that floods the pages you are about to read. It also accounts for the fact that most of the book is not written in English but in Dissertationese, even though I have tried to reduce the latter component during continuous revisions. Finally, it might explain why only a limited number of professional linguists are likely to come up with a realistic hypothesis as to what the study is about after reading the title and the table of contents.

Many people have helped me during the process—far too many for me not to forget somebody, I am afraid. I am especially indebted to several persons who helped me with some data, gave me valuable advice, corrected some of my mistakes, or simply discussed ideas with me: Balthasar Bickel, Matthew Dryer, Karen Ebert, Michele Loporcaro, Noel Rude, Richard Rhodes, and Martin Salzmann. Although they do not necessarily agree with what I have written, most of what is useful in these pages I owe to them in one way or another. Since cross-linguistic research would not be possible without descriptive studies, I gladly acknowledge a debt of gratitude to all authors of descriptive grammars. I am particularly grateful to Clarita Antinao, Arturo Lincopi, and Leonel Lienlaf, People of the Land who helped me with their language, and to Vicente Ruiz, that most remarkable *wingka* who introduced them to me. Annette Brechbühl-Taylor went to great pains to help me make the book more readable. My wife was supportive and encouraging beyond belief.

If the reader learns to prize beautiful ways of singing *I am loved by her* designed and enhanced down through the centuries in the Americas instead of Liverpool, I shall consider some years of work not to have been spent in vain.

Abbreviations

A	actor
ABS	absolutive
ACC	accusative
ad	addressee
AI	animate intransitive
AL	alignment
ALL	allative
AND	andative
ANIM	animate (=anim)
APPL	applicative
ART	article
AUX	auxiliary
B.APPL	beneficiary applicative
BEN	beneficiary
CAUS	causative
CERT	certitude
CIS	cislocative
CNJ	conjunct
COMPL	completive
COND	conditional
CONT	continuative
d	dual
DAc	different actant
DAT	dative
DECL	declarative
DEF	definite (=def)
DEM	demonstrative
DERIV	derivational element
DETR	detransitive
DIM	diminutive
DO(bj)	direct object
DIR	direct
DP	distributive plural
e	exclusive
E	extended argument
EDO	external direct object
ELS	extended local scenario
ERG	ergative
FP	focal person
FUT	future
G.APPL	goal applicative
GEN	genitive
GB	Government and Binding
GR	grammatical relation
HAB	habitual
HP	high-pragmatic
HS	high-semantic
i	inclusive
I	set I affix
IDO	internal direct object
II	inanimate intransitive / set II affix
III	set III affix
IMPER	imperative
INAN	inanimate (=inan)
INCMPL	incompletive
IND	indicative
INDEF	indefinite (=indef)
INF	infinitive
INV	inverse
IO(bj)	indirect object
IPFV	imperfective
IRR	irrealis
ISA	intransitive stem agreement
ITR	intransitive
IV	set IV affix
LFG	Lexical-Functional Grammar
LOC	locative
LP	low-pragmatic
LS	low-semantic

MLS	minimal local scenario
NEG	negative
NOM	nominative
NP	noun phrase
nPA	non-primary argument
ns	nonsingular
NSubj	nonsubject
O	undergoer
Obj	object
OBJ	objective
Obl	oblique
OBV	obviative
OT	Optimality Theory
p	plural
PA	primary argument
PART	particle
PASS	passive
PERS	personal pronoun
PFV	perfective
PM	personal marker
PO(bj)	primary object
POSS	possessive
PPOS	postposition
PRED	predicative
PRES	present
PRET	preterit
PROG	progressive
PROX	proximate
PT	past
Q	interrogative
RCG	Radical Construction Grammar
RECPT	recent past
REFL	reflexive
REL	relative
REP	reportative
RG	Relational Grammar
RI	ruptured implicature
RRG	Role and Reference Grammar
s	singular
S	single argument
SA	secondary argument
SAc	same actant
SAP	speech act participant
SDIR	strong direct
SF	syntactic function
SO(bj)	secondary object
sp	speaker
SP	satellite person
SR	switch-reference
STAT	stative
SUB	subordinator
Subj	subject
TA	transitive animate
TAM	tense-aspect-mood
TI	transitive inanimate
TR	transitive
VOC	vocative
VP	verb phrase
X	unspecified actant
1	1st person
2	2nd person
3	3rd person
12	1st person inclusive

Introduction

> Let me tell you a story; let me give you a secret chapter of my life—a chapter that has never been referred to by me since its events transpired.
> — Mark Twain, *Cannibalism in the cars*

A number of linguists dealing with challenging language descriptions and/or elusive typological issues have propounded various rationales for the fact that constructions like *a chapter that has never been referred to by me*, which can be found occasionally in Germanic languages like English or German, are never to be heard in some languages scattered in Siberia, South Asia, Australia, and the Americas. Moreover, even utterances as natural for speakers of English as *such a reply wouldn't surprise me* appear to be banned from the inventory of grammatical constructions of some languages currently spoken around the globe.

Probably most tongues induce their speakers to portray transitive states of affairs with some entities receiving preferential treatment in the grammar in some way or the other while others are given a less prominent place. However, in several languages, various morphological and syntactic processes reveal the sensitivity of linguistic structures to an underlying hierarchy of entities along semantic, referential, and/or pragmatic parameters. To use Nicholas Evans' (1997) theatrical simile, it may be that both role and cast matter. In a given culture and at a given moment of time, an actress's physical appearance might explain why she is constantly a sex symbol or romantic heroine, and the way an actor is perceived by the audience may make it virtually impossible for him to get roles different from corrupt policemen or serial killers. Similarly, 3rd persons may be dispreferred subjects when interacting with a 1st person, no matter what the particular state of affair is, i.e., who does what to whom, or human entities involved might be cross-referenced morphologically on predicates at the expense of inanimate entities, which do not get marked at all. Thus, entities are seen as ordered on a hierarchy where not only social groups, professional status, and the like, played a role. Some languages set up hierarchies that encompass animals, plants, rocks, and abstract concepts—a "great chain of being" (Frishberg 1972).

In the 1970s, case marking and verb agreement systems in different

languages were explored in order to make sense of how grammar reacted to this hierarchy, if indeed there was only one, or to similar hierarchies that were related to each other but could not be reduced to a single ranking. Some of these famous studies (e.g. Hale 1973a, Frishberg 1972, Witherspoon 1977, Silverstein 1976, Heath 1976a, and Dixon 1979) paved the way for fruitful research in the 1980s (e.g. DeLancey 1980, 1981a, 1981b, 1982, Dahlstrom 1986, Thompson 1989) and for very numerous studies in the 1990s (e.g. Yang 1992, the articles in Givón 1994, Aissen 1996, 1997, Dixon & Aikhenvald 1997, Fadden 2000, Givón 2001, and the references therein). Especially Johanna Nichols' (1992) well-known book and many later studies in an analogous vein (if not with a comparable scope) took this chain of being and its morphosyntactic reflexes seriously and gave them a place in relational typology, i.e., the models coping with accusativity, ergativity, and similar so-called alignment patterns.

These three decades witnessed the discovery of language after language where the case could be, and indeed was, made for the sensitivity of their verb morphology to nominal hierarchies. No sooner had the term INVERSE been taken from Algonquian linguistics and applied to a number of languages neither genetically nor areally related to Algonquian than a controversy arose as to the appropriateness of such accounts due to the fact that some constructions were formally similar to passives. Although many interesting studies focused on evidence showing whether in a given language a particular construction was to be regarded as an inverse or a passive (e.g. Rose & Carlson 1984, Whistler 1985, Emanatian 1988 and Nakayama 1997 on Nootka, to name but one case), opinion is still divided on the issue of inversion. Mirroring the old controversy between lumpers and splitters of linguistic families, most linguists have tended to choose either a broad or a narrow view of this phenomenon. Roughly, lumpers define inversion functionally and therefore find it in many languages, while splitters define it structurally and prefer to think of the Algonquian system as the prototype and to label many of the candidates simply passive.

To my mind, a third approach is not only viable but also desirable if we are to understand how, and perhaps why, a nominal hierarchy determines verb morphology, clause structure, and syntax in general. The goal of this study is to propose such a third approach and to illustrate its application to a variety of languages. Chapter I is devoted to a model of alignment that takes the relevance of nominal hierarchies into account. Chapter II formulates a theory of direction according to which direction, alignment, and voice are three different domains of grammar that may interact. As a result, some languages show standard (i.e. accusative or ergative) alignment and voice patterns while displaying a direction opposition. Other languages express the category of direction through a familiar voice opposition, and some languages go even further in that the direction opposition determines the choice between arguably non-derived clause types.

The foundation laid in these two chapters guides the analysis of the individual systems in the subsequent five chapters. Chapter VIII summarizes the findings, explains their significance, and makes suggestions for further research.

I limited myself to indigenous languages of the Americas and chose twelve of them on several grounds. It was obviously important to address languages that are often mentioned in the discussion (Algonquian) as well as languages that are relatively less known (Mapudungun). Some of them belong to well-established language families, like the Algonquian, the Sahaptian, and the Kiowa-Tanoan languages, while others are isolates, like Kutenai and Mapudungun. Some of them are areally related, like Algonquian and Kutenai on the one hand and the Tanoan languages on the other. Instead of separating all these languages according to typological or impressionistic criteria, I followed Kroskrity (1985) in treating them as historical socio-cognitive constructs with a distinct placement in both space and time, and so I have dealt with them taking their common origin as point of departure.

The informed reader may wonder why I have omitted other languages that play an important role in the discussion of this subject, such as those from the Athabascan and Salishan families. First, I wanted to include case studies, but the thrust of the book was to be rather programmatic. Therefore, a reasonably satisfactory treatment of the Athabascan family lay outside the scope of the present work but will hopefully appear as a later study. Second, interesting as a survey of Salishan is, the Tanoan family already played a role similar to the one these languages would have played for the present comparative purposes, so I decided not to become repetitive on the issue of inverse-though-passive. (However, Coast Salish languages are mentioned in the sketch of optimality-theoretic accounts in Appendix 3.) A number of more recently described languages of Mexico are of immense interest as well, but I hope that further research on this subject will be more comprehensive and that in the not too distant future the linguistic profession will be able to consult a solid reference work on this fascinating topic that includes most known languages showing related phenomena in one form or the other.

Chapter 1
Alignment and direction

> By this it appears that Reason is […] attayned by Industry; first in apt imposing of Names; and secondly by getting a good and orderly Method in proceeding from the Elements, which are Names, to Assertions made by Connexion of one of them to another; and so to Syllogismes, which are the Connexions of one Assertion to another, till we come to a knowledge of all the Consequences of names appertaining to the subject in hand; and that is it, men call Science.
> — Thomas Hobbes, *Leviathan*

Three fundamental concepts need to be introduced right from the beginning. First, the specific types of semantic relationship existing between a predicate and its arguments—notions like agent, patient, theme, or location—are customarily referred to as SEMANTIC or THEMATIC ROLES. Second, semantic roles are usually grouped together along a double parameter of control and affectedness, with those high in control and low in affectedness on one side and those low in control but high in affectedness on the other. I henceforth follow Role and Reference Grammar in labeling the former actor and the latter undergoer, and in calling them MACROROLES (Foley & Van Valin 1984, Van Valin & LaPolla 1997); other labels found in the literature include GRAMMATICAL ROLES.

The third essential concept to be used in this study is called GRAMMATICAL RELATIONS (GRs) or SYNTACTIC FUNCTIONS (SFs). Whereas the main point of controversy regarding semantic roles is their relative ranking, there is wide disagreement among linguists as to what syntactic functions are and how they are to be defined. Formalist frameworks have tended to treat notions like subject and object as primitives (e.g., Relational Grammar) or as structurally defined (e.g., Chomskyan theories), whereas analyses that regard syntax as less autonomous have preferred to consider those notions content-oriented. A further unresolved matter is whether GRs are best thought of as universal, and if so, in which sense. Some linguists believe in the existence of universal, language-specifically instantiated GRs, others see them as essentially language-specific, and still others postulate syntactic models that do without them altogether.

In this study, I follow the bulk of recent functionalist work in treating grammatical relations neither as primitives nor as structurally defined, which means that GRs are not seen as discrete categories. Unlike many functionalist studies of the last two decades, however, I acknowledge some critical points made by both formalists and functionalists and do not assume GRs to be universal notions that are instantiated in individual languages with more or less conformity to prototypes.[1] Instead, I treat GRs as language-specific notions that may well be fuzzy—something to which I will return later on. The question whether, as proposed by Croft (2001) and mentioned in Chapter VIII, GRs can and/or ought to be dispensed with is left open here.

To my mind, such a stance on the nature of GRs is not only methodologically convenient but also theoretically innocuous. Assuming the existence of universal pre-established and discrete categories can lead to a serious misrepresentation of the object of study, as has been convincingly argued for numerous phenomena in descriptive linguistics. The failure to recognize underlying similarities or some kind of fundamental unity by focusing on language-specific details can be compensated for at a later stage of the cross-linguistic analysis if needed, but since it is controversial whether such a need inevitably leads to postulating universal notions I will follow Dryer (1997) here in not assuming a priori GRs.

Linguistic typology deals, among many other things, with the different types of mapping between macroroles and grammatical relations. This particular area is known as contentive typology (Klimov 1979, 1985, 1986), relational typology (Plank 1985, Primus 1995), or alignment typology (Nichols 1990, 1992), and I will use the latter label in this study. Descriptive studies also address these issues, at least implicitly, in order to explore the grammatical category of voice in a particular language. The comparatively recent study of direction cannot afford to neglect either the theoretical considerations or the empirical findings provided by alignment typology, as will become obvious in what follows.

The present chapter articulates a basic theory of alignment based upon some proposals available on the non-formalist markets (Section 1), addresses the phenomenon of several patterns coexisting in a given language (Section 2), and discusses in detail the alignment type that interests us in this study because of its relationship with direction, viz. hierarchical alignment (Section 3).

[1] Newmeyer (1998) and Haspelmath (2000) address both the general question of prototypical categories and its application to the problem of defining word classes. Dryer (1997) specifically argues against prototypical grammatical relations.

1. Alignment and alignment types

Most authors agree either explicitly or implicitly on defining alignment as "the distribution of morphological markers or of syntactic or morphological characteristics; it is intended as a neutral way of referring to ergative, accusative, and other distributional patterns" (Harris & Campbell 1995: 240). One way of modeling these distributional patterns was developed by Dixon in the 1970s, subsequently refined (cf. Comrie 1981, Dixon 1994, Dixon & Aikhenvald 2000) and adopted by many other scholars. Dixon & Aikhenvald formulate the fundamentals of their model of alignment (henceforth SAO model) as follows:

> There are two universal clause types: intransitive clause, with an intransitive predicate and a single core argument which is in S (intransitive subject) function; transitive clause, with a transitive predicate and two core arguments which are in A (transitive subject) and O (transitive object) functions. That argument whose referent does (or potentially could) initiate or control the activity is in A function. That argument whose referent is affected by the activity is in O function.
>
> (Dixon & Aikhenvald 2000: 2)

Core arguments or actants are distinguished from peripheral arguments or adjuncts in that the former must either appear overtly or be understood for the clause to be meaningful, whereas the latter are said to be "less dependent on the nature of the verb" (2000: 2) and typically correspond to optional specifications of location in time or space, cause, purpose, etc. As already noted, I will indistinctly refer to the A function or actor macrorole in what follows, and to the O function or undergoer macrorole. The S function is usually simply the "single argument" of a monovalent verb. Different alignment types built on these three notions—S, A, and O—are shown in Table I-1 below:

Table I-1
SOME ALIGNMENT TYPES

	O	S		A
		S_O	S_A	
Accusative	α	β		
Ergative	α			β
Tripartite	α	β		γ
Double oblique	α	β		α
Agentive	α		β	

from Harris & Campbell (1995: 240)

The morphological markers referred to in Harris & Campbell's definition above are nominal case markers and verb agreement or personal marking. Together with word order, they constitute the overt coding properties of grammatical relations (cf. e.g. Givón 2001: 175). In addition, there is a number of behavior-and-control properties that can be seen in constructions like promotion to object, raising, relativization, reflexivization, and the like (cf. Keenan 1976). Both kinds of properties will be addressed in this study, even though the information on syntactic processes is usually more difficult to obtain and to interpret than declension and conjugation paradigms. In what follows and for expository purposes only, the different alignment types are exemplified by means of the morphological coding properties mentioned.

The accusative type can be illustrated with Latin examples:

(1) LATIN ACCUSATIVE CASE AND VERBAL MARKING

a. [Domin-**us**]$_A$ [serv-**os**]$_O$ lauda-**t**.
lord-sNOM servant-pACC praise-3s
'The lord praises the servants.'

b. [Domin-**us**]$_S$ curri-**t**.
lord-sNOM run-3s
'The lord runs.'

The markers on the verb and the case suffixes on the nouns show an accusative pattern that treats A and S alike, viz. (i) *-t* for 3sS/A and nothing for 3pO on the one hand and (ii) *-us* for nominative singular and *-os* for accusative plural on the other.

The ergative type may be illustrated with examples from Basque. Since verb agreement is more complicated than what needs to be explained here, only the case suffixes shall be addressed:

(2) BASQUE ERGATIVE CASE

a. [Seme-**ak**]$_A$ [emakume-**a**]$_O$ ikusi du.
son-sERG woman-sABS see have:3sERG:3sABS
'The son has seen the woman.'

b. [Seme-**a**]$_S$ etxe-ra joan da.
son-sABS house-sALL go be:3sABS
'The son has gone to the house.'

The NPs in S and O functions are marked with the same singular absolutive suffix *-a*, whereas the NP in A function has a marking of its own, viz. the singular ergative suffix *-ak*.

In the comparatively rare tripartite or three-way system, A, O and S are treated in a distinct manner.[2] Nez Perce case marking on 3rd person nominals follows this alignment:[3]

(3) NEZ PERCE TRIPARTITE CASE (Mithun 1999)

a. [ɻáɻaac]$_S$ hi-wéhyem
Grizzly 3sS/A-came
'Grizzly came.'

b. [ɻáɻaas-**nim**]$_A$ hi-twekíice
Grizzly-ERG 3sS/A-follows
'Grizzly follows me.'

c. ['óykalo-m titóoqan-**m**]$_A$ páaqa'ancix [ɻáɻaas-**na**]$_O$
all-ERG people-ERG they.respect.him Grizzly-ACC
'All people respect Grizzly.'

Both A and O are marked alike in the double oblique system, and differently from S, as in Rošani in the past tense:

(4) ROŠANI DOUBLE OBLIQUE CASE (Payne 1980:155)

a. [**Duf** xawrič-ēn]$_A$ [**um** kitōb]$_O$ x̌eyt.
these:OBL boy-p that:OBL book read:PT
'These boys read (PT) that book.'

b. [**Dāδ** xawrič-ēn=an]$_S$ tar Xaraγ sat.
these:ABS boy-p=3p to Xorog go:p:PT
'These boys went to Xorog.'

Rošani case is marked on the demonstratives: both *duf* 'these' and *um* 'that' are oblique while *dāδ* 'these' is absolutive. Such an alignment is sometimes said to be dysfunctional since a distinction that is unnecessary (the one between the actants of the transitive verb and that of the intransitive verb) is made while a distinction that is communicatively meaningful (the one between both actants of the transitive verb) is not.

Finally, the agentive alignment is illustrated with examples from Choctaw:[4]

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[2] Another (rather infrequent) term for this system is CONTRASTIVE, cf. Kazenin (1994).

[3] Incidentally observe that the system found in Nez Perce is labeled FOUR-WAY by Woolford (1997). By treating a particular construction called "antipassive" by Rude (1985) as transitive, she sees marked undergoers as exponents of the "objective" case and unmarked ones as instances of the "accusative". Just as these two are considered cases for objects, the unmarked nominative and the marked ergative are thought of as cases for subjects—hence the four cases. Cf. Chapter V for more details on Nez Perce.

[4] I follow Mithun (1991) here in distinguishing AGENTIVE ("agent-patient") systems that reflect macrorole alignment from the comparatively less frequent ACTIVE ("active-stative") systems, where grammatical categorization is related to aspectuality.

(5) CHOCTAW AGENTIVE VERBAL MARKING (Foley & Van Valin 1977:298)

a. Si-(y)abīka-h.
1sO-be.sick-PRES
'I am sick.'

b. Iš-iya-h.
2sA-go-PRES
'You$_s$ are going.'

c. Či-pīsa-li-h.
2sO-see-1sA-PRES
'I see you$_s$.'

In this system, personal marking on the predicate directly mirrors macrorole assignment: the 1st person is marked as actor (*-li*) or as undergoer (*si-*), and so is the 2nd person (*či-* and *iš-*, respectively)—irrespective of whether the predicate is monovalent (a, b) or bivalent (c).

For some languages, Dixon & Aikhenvald further postulate "extended clauses" based upon the two basic types just defined, thus arriving at a total of four possible clause types, shown in Table I-2. The symbol E corresponds to an additional argument, typically a recipient, beneficiary, stimulus, etc.

Table I-2
CLAUSE TYPES ACCORDING TO DIXON & AIKHENVALD (2000)

	Basic	Extended
Intransitive	S	S E
Transitive	A O	A O E

Dixon & Aikhenvald briefly note several possibilities when taking extended clause types into account, with some concrete examples found worldwide. In the clauses exemplified in Table I-3, A is marked differently from O, so in principle these alignment possibilities are compatible with accusative, ergative, tripartite, and agentive alignments.

Table I-3
ALIGNMENT TYPES IN EXTENDED TRANSITIVE CLAUSES

	A	O	E	peripheral
e.g. Latin	α	β	γ	δ
e.g. Jarawara	α	β	γ	
e.g. Kinyarwanda	α	β		δ
e.g. Creek	α	β		

from Dixon & Aikehnvald (2000: 3)

2. On polynomy and types

2.1 Splits

The above definition of alignment allows for the possibility that a language shows distinct alignment systems in different realms. In particular, there may be an overall ergative morphology but an accusative syntax—a situation that actually exists in some languages and has given rise to the question of deep ergativity, which shall concern us below. Moreover, phenomena like case marking systems might for example work accusatively for some (pro)nominals and ergatively for others, or accusatively in some tense/aspect-configurations and ergatively in others. In fact, the Rošani examples in (4) above tell only part of the story; in the present tense, case marking follows an accusative pattern:

(6) ROŠANI ACCUSATIVE CASE MARKING (Payne 1980:155)

a. [**Dāδ** xawrič-ēn]$_A$ [**um** kitōb]$_O$ x̌ōy=an.
these:ABS boy-p that:OBL book read:PR=3p
'These boys are reading that book.'

b. [**Dāδ** xawrič-ēn]$_S$ tar Xaraγ sāw=an.
these:ABS boy-p to Xorog go:PR=3p
'These boys are going to Xorog.'

Therefore, Rošani has a split system with accusative case in the present tense and double oblique case in the past.

Such split systems are well known in typological studies, so I will not provide the split-ergativity examples probably expected by the reader—who should consult Dixon (1994: ch4) for a discussion of some split systems instead. In addition to the splits driven by NP semantics and TAM, syntactic splits are also found (main versus subordinate clause), and there is some evidence suggesting the existence of more abstract splits that cannot be plausibly construed as motivated by either semantics or syntax (Pustet 1997).

A simple SAO model can accommodate splits, but the additional dimension is something of a *deus ex machina* in that the model originally shows how alignment patterns are distributed but does not tell why they should be distributed in a particular way. The simple mechanics have to be complemented with an explanation of the link between a given nominal hierarchy and the aspectual distinction on the one hand, and the case split on the other.[5]

[5] One of the most principled frameworks dealing with split case and similar challenges is Optimality Theory; cf. Legendre et al. (1993), Aissen (1999), and Woolford (2001).

A terminological note

I will occasionally use the term *polynomy* in this study as a hyperonym to "split alignment".[6] In my opinion, it is convenient because it does not imply that some fundamental unit has been split but rather that two different principles or rules are at work. In addition, the term is not used with an alternative meaning in linguistics—or, for that matter, in the humanities.[7] Whenever a morphosyntactic phenomenon appears to be governed by two or more underlying principles, I shall call it *polynomial*, and well-established terms like split ergativity will be applied to particular cases thereof.

Pivots and primary arguments

It is important to bear in mind that the alignment patterns described in Section 1 are construction-specific; at least in principle, each morphological or syntactic phenomenon could define a grouping of S, A and O of its own. Following RRG, I will call such a central argument the PIVOT of a particular construction. By contrast, a pivot recurring across several constructions will be labeled PRIMARY ARGUMENT here, with subject or S/A as a special case thereof.

Given that no natural language known so far organizes its entire morpho-syntax according to only one alignment pattern, splits might be said to be trivial in that they are the rule rather than the exception. Nevertheless, while in some languages most constructions show an S/A pivot, in many others there is a distinction between a morphology that patterns ergatively and a syntax that patterns, at least to a great extent, accusatively. Even accusative morphologies that look fairly consistent at first glance show some exceptional areas, such as a special verb class (typically, but not necessarily, experiencer verbs or a subset thereof) that has a pivot of its own. Thus, one could be tempted to address the question of syntactic functions distinguishing morphological primary arguments on the one hand and syntactic primary arguments on the other. The former would be the dominant pivot with regard to coding properties, and the latter the dominant pivot as to behavioral properties. With respect to morphology, "dominant" would mean the pattern that emerges from considering most verb classes (including loanwords) and verb formation processes, but if the picture is

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[6] The Modern Latin terms *binomius* and *binomial* (cf. *bi-* 'two', *nomen* 'name, term') were imported into English in the 16th century to characterize algebraic expressions consisting of two terms (e.g., $x^2 + 3x$), and gave rise to the term *polynomial* (cf. Ancient Greek πολύς *polús* 'much') about one century later. *Polynomy* as used in this study, however, is a compound of two Ancient Greek words, viz. πολύς and νόμος *nómos* 'law, rule, custom'.

[7] A different term would have been *schizonomy* (from Ancient Greek σχίζειν *schízein* 'split' and νόμος *nómos* 'law, rule, custom'), but this label clearly implies that some unit has been split, which I explicitly want to avoid.

rather blurred one can postulate verb class-specific pivots. As to syntax, "dominant" would mean the pattern that emerges from considering most of the applicable criteria along the lines given in Keenan (1976).

That such a notion of dominance is problematic can be seen from a variety of studies dealing with what has been called the diffuseness of grammatical relations (cf. e.g. Comrie & Borg 1984 and Haspelmath & Caruana 2000 for object and subject diffuseness in Maltese, respectively, but also Cole et al. 1980 for a more general discussion). In many languages, there may be a gradient between one syntactic function and another in that, with different predicates, arguments are subject-like or object-like to varying degrees as measured by an inventory of coding and behavioral properties, and it might be far from clear where a dividing line should be drawn.

If case markers pattern accusatively in the imperfective aspect and ergatively in the perfective, it is as arbitrary to call such a system split-accusative as it is to label it split-ergative—except in case the morphology is "dominantly" ergative, in which case the latter term does not seem entirely inadequate. With syntactic splits, some constructions may have an S/A pivot, others an S/O pivot, and others no pivot at all. In these cases, how many, or which, syntactic tests have to be met for the language to qualify as split-accusative instead of split-ergative? Such terminology is potentially more misleading than illuminating and often includes theory-specific preferences such as to treat (some) syntactic properties as "basic". In fact, the extent to which these questions are theoretical rather than empirical shall concern us shortly.

These problems notwithstanding, I will use the notions "morphological primary argument" and "syntactic primary argument" in this study whenever it appears useful to do so. Needless to say, clause argument structure may be such that secondary or even tertiary arguments play a role, in which case it is meaningful for the description of the relevant morphosyntax to employ these notions. Notice that the pairs pivot / primary argument and morphological / syntactic primary argument aim solely to make a precise analysis possible.

The functional correlate of special morphological treatment is the topic of an interesting article by Serzisko (1991). Some arguments can be thought of as central while others are rather peripheral (cf. Mithun & Chafe's notion of "immediacy of involvement" further down), and case marking, verb marking, and/or word order may reflect this fact iconically. In this view, some arguments are said to be more distant from the predicate than others, and the various morphosyntactic processes altering valence and the like are seen as functionally centralizing or decentralizing. The key concept introduced by Serzisko is ORIENTATION, defined as which argument is chosen as central by the predicate (1991: 305). I will not pursue this issue further here.

Mixed pivots and syntactic functions

As noted in Croft (1991: 30f), it is not arbitrary which combinations of pivots are found in natural languages. In particular, a strong case can be made in favor of an "ergative rule hierarchy" where syntactic processes like coreferential argument omission in coordination and focusing extraction appear to precede morphology like verbal and case marking. In other words, if coreferential argument omission works ergatively, case marking does so as well, but not the other way round. Kazenin (1994) looks a little more closely at the syntactic side and comes up with a fine-grained hierarchy where coreferential argument omission precedes control of purposive clauses, which in turn precedes relativization. The rationale for such a hierarchy is said to be sought in the functional need of foregrounding and backgrounding mechanisms that operate differently in different syntactic domains, yielding either S/A or S/O pivots.

The traditional approach to ergative syntax (according to which syntactical ergativity is an "all or nothing affair", Dowty 1991: 9) leads to regarding the handful of Australian languages where a respectable number of behavioral properties pattern ergatively as an interesting but marginal residue—the bulk of the world's languages are syntactically accusative, it is argued. Work by Manning (1996) has replied to this by proposing two levels of syntactic organization called argument structure (a-structure) and grammatical relations structure (gr-structure).[8] The former is the result of the grammaticalization of notions with semantic prominence, close to Dowty's (1991) proto-agent and proto-patient, and the mapping from the predicate meaning to a-subject and a-object is called argument projection. The a-subject is comparable, but not identical, to Dixon's notion of "deep subject" and Jespersen's "logical subject". It includes "deep subjects" but also compound argument structures that result from derivational operations like passivization, causativization and anti-passivization—in other words, valence-changing operations are operators on a-structure in this view. By contrast, the latter is the result of the grammaticalization of discourse roles related to notions like topic and/or focus, and the mapping between a-structure and gr-subject (roughly, Dixon's pivot) and gr-object is called linking theory. Therefore, the notions already sketched for our SAO model correspond to a-structure while Manning labels those found in gr-structure differently, viz. pivot (P), other core (C) and oblique (O) arguments.[9] This is summarized in (7):

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[8] I follow here the comprehensive exposition in Manning (1996), but the interested reader is referred to Manning (1997) and Manning & Sag (1999) as well for more details.

[9] Manning provides the following correspondences between his levels and those found in other theories: VP-internal relationships (GB, minimalism) for a-structure, and final grammatical relations (RG), f-structure (LFG), configurational positions of NPs at s-structure (GB) for gr-structure.

(7) MANNING'S TWO-LEVEL SYNTAX

predicate meaning	$argument_1$	$argument_2$	
	↓	↓	argument projection
a-structure	a-subject	a-object	
	↓	↓	linking theory
gr-structure	gr-subject	gr-object	

The point here is that Manning expects "to find in any language a principled division between phenomena that are sensitive to the level of grammatical relations, and phenomena that are sensitive to argument structure" (1996: 20). Consequently, some behavioral properties like binding, control and the addressee of imperatives have a "semantic flavor" and are sensitive to a-structure relations, whereas others like relativization, restrictions on topicalization, launching of floating quantifiers, raising, and coreferential omission in coordination are rather purely syntactic and sensitive to gr-structure relations. In other words, the central claim is that

> in many languages various phenomena are neutral (particularly phenomena that are sensitive to surface grammatical relations). The prediction is rather that if a phenomenon is restricted it should be sensitive to relations at the appropriate level.
>
> Manning (1996: 34)

Manning proposes that a-structure is in general accusative, and that gr-structure may show different groupings of relations. While in a syntactically accusative language gr-structure patterns accusatively or neutrally, gr-structure is expected to work ergatively or neutrally in a syntactically ergative language; a-structure always functions accusatively. Syntactically accusative languages are those where a-subjects and a-objects are simply linked to gr-subjects and gr-objects whereas languages with ergative syntax are those in which there is an inverse mapping for transitive clauses: a-subjects are linked to gr-objects, and a-objects to gr-subjects. The latter is what Manning calls "inverse grammatical relations analysis" and is schematically summarized in Figure I-1 below:

Figure I-1
Inverse grammatical relations analysis

The shaded area on the left is the a-subject, and the shaded area on the right is the gr-subject in a language that displays syntactic split ergativity. Some, typically rather semantics-driven, processes are sensitive to an S/A pivot while others may pattern ergatively.

Since the purpose of the present study is not an in-depth syntactic analysis of languages that show direction-marking patterns, most issues raised by the application of such a model will not be addressed here. However, moving beyond a simple dichotomy between morphology and syntax by means of such a two-level analysis as Manning's might prove useful when discussing alignment in languages that show sensitivity to an indexability hierarchy. The question here is, is there any evidence for something like the inverse GRs analysis in the languages that interest us here? More precisely, do some pivots depend upon the indexability hierarchy while others do not? If so, which ones? I shall come back to this issue when discussing Algonquian (Chapter III) and Mapudungun (Chapter VII), and at the end of the book.

Some further remarks on the SAO model

A recent article by Mithun & Chafe (1999) considers the functions S, A, and O adequate if understood as heuristic devices but not if thought of as a theory of universal clause-argument structure. In particular, these authors claim that a more refined analysis beyond S, A, and O is not merely a possibility but a necessity for some languages. Whereas S/A pivots are preferred "starting points" (i.e., the vantage point from whose perspective states of affairs are portrayed, seen in word order and clause combining patterns), S/O pivots correspond to the "most immediately involved actant" (seen in lexical semantics relations)[10], none of which is addressed by a simple version of the SAO model. Finally, "[t]he concentration of agent-patient patterns in pronominal affixes in verbal morphology accords well with their function of coding the semantic roles of participants" (p. 592), suggesting that S is probably a construct rather than some kind of primitive for a number of languages.

Although the present study makes use of an SAO model in order to explore alignment patterns in several languages, no claim whatsoever is made as to its universality. Nor are intransitive and transitive clauses considered universal in any sense. As a matter of fact, some studies cast serious doubts on the adequacy of the simple dichotomy intransitive versus transitive, and I shall try not to obscure the analysis by assuming an a priori universality of these notions.[11]

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[10] Cf. Du Bois (1987) for a discussion of the discourse basis of the S/O pivot, and Keenan (1984) for its semantic correlates.

[11] To name but a few, Mithun & Chafe (1999), Dryer (forthcoming), and of course Hopper & Thompson (1980) show that a more refined analysis is needed. Some accounts suggest that

Moreover, what has been presented as the agentive alignment system above is not analyzed here as an instance of polynomy, since there is arguably enough evidence against the notion of S for languages that fairly consistently mark macroroles on their predicates. Therefore, the terms "fluid-S" and "split-S" (Dixon 1994) are not used in the present framework.

2.2 Features and types

Up to this point we have seen that morphological and/or syntactic phenomena may treat some of the functions S, A, and O alike, thereby defining construction-specific pivots and some kind of syntactic functions called here primary arguments. This subsection addresses the question of individual FEATURES, such as pivot-defining constructions, versus more comprehensive LANGUAGE TYPES.

Klimov's types

According to Klimov, a language type is an "abstract model for the comparison of languages which are structurally different" (1986: 105). Instead of merely mirroring the structures found in a given language, a type "should represent a construct comprising a set of structural features, serving as diagnostic criteria for attributing languages to a definite typological class" (1986: 106; cf. also 1985: 178). Klimov explicitly sees the result of such an abstraction process on a par with other abstractions like linguistic area and language family. Furthermore, he rejects the notion of "mixed type" but acknowledges the existence of mixed concrete forms, i.e. individual languages.

Thus, Klimov postulates accusative, ergative, and agentive language types, and "possibly other systems" (1985, 1986). Observe that "the total complex of features making up a language type, e.g. a set of its differential features, should comprise only logically interdependent—and not freely combinable—phenomena" (1986: 107). Each of these three types displays lexical, syntactic, and morphological features, and Klimov is cautious as to their exact relative ranking but assumes that they form a certain hierarchy. In fact, he eventually follows the received opinion according to which the lexicon is primary and grammar is secondary (and, less assertively, syntax is more fundamental than morphology). He briefly mentions that content-oriented typological inquiry lends empirical support to this claim (1986: 109).

In his 1985 article, Klimov characterizes his three models in some detail.

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the existence of this simple dichotomy may not be taken for granted. It might well be the case that no transitive clauses need to be postulated (Kiparsky 1987 for Dyirbal and Mel'čuk 1988 for Lezgian), or that derived "passive" clauses are best regarded as transitive (Keenan & Manorohanta 2001 for Malagasy).

The accusative type distinguishes intransitive and transitive verbs in the lexicon, subjects and objects in the syntax (along with passive voice), and nominative and accusative marking in the morphology. By contrast, the ergative type classifies predicates as factitive or agentive in the lexicon, has an S/O pivot and objects that are not directly comparable to the direct and indirect objects of the accusative type in the syntax, and shows ergative and absolutive marking in the morphology. Finally, agentive languages distinguish active and stative verbs (and animate and inanimate nouns) in the lexicon, active and inactive clause patterns in the syntax, and a concern with version and aktionsart in verbal (and possession in nominal) morphology.

A first look at Nichols' types

Whereas Klimov says that "it is possible to conclude that precisely in the realm of lexicon some fundamental traits of language structure reside, and that they cause the functioning of most of the phenomena observed at other levels" (1986b: 109), Nichols (1986b) argues against the idea that content determines form. She provides counter-evidence showing that the relation between the lexicon, syntax, and morphology is complex in that many causal relationships can be found: form that determines content, form that determines form, content that determines content, and form and content that determine each other. In this light, Klimov's assumption is a re-statement of what Nichols calls the "Saussurean dogma", which is best seen as a hypothesis subject to empirical verification. Needless to say, the issue of modularity of language structure and the nature of the interactions between the various realms are complex and controversial matters that lie beyond the scope of the present study.

Nichols recognizes the interest of Klimov's lexical, syntactic and morphological features, but her studies concentrate on verbal and nominal morphology; her content-oriented types are "defined on the morphological level" (1990: 96):

> Klimov […] presents a well-developed approach to typology in which the basic classificatory principle is whole language types rather than such individual features as case systems or word order. Those whole types are founded on ultimately content-based notions, such as active/inactive, agent/factitive, etc., by which languages organize predication. […] I will speak of Klimov's system as involving CLAUSE ALIGNMENT and consisting of ALIGNMENT TYPES; this is done for mnemonic purposes and should not be taken to imply that it is morphosyntax rather than content that informs Klimov's classification.
>
> (Nichols 1990: 95, emphasis in the original)

Consider the following crucial passage from Nichols' 1992 book:

> Klimov carefully distinguishes type from features, faulting most of contemporary typology for failing to make this distinction and pointing out that much of what is called typology is actually the cross-linguistic study of features rather than types. [Nichols' footnote: That criticism applies to this book as well.] A type, in Klimov's view, is a set of independent but correlated features from different levels of grammar, accompanied by a theory explaining the correlation.
>
> (Nichols 1992: 8)

In her 1990 article, Nichols argues in favor of two different content-form pairs: (i) alignment limiting morphology (isolating languages tend to show accusative morphosyntax), and (ii) morphology limiting alignment (both active and hierarchical languages appear to be head-marking). Her later definition of "hierarchical languages" will be discussed in more detail in the next section, but let me quote here an early definition of hers which is particularly interesting:

> [P]erson, animacy, and/or gender categories determine access to agreement slots or syntactic functions so pervasively that it is difficult or impossible to say whether the language is otherwise basically accusative, ergative, or stative/active.
>
> Nichols (1990: 96)

Observe that "hierarchical" seems to have a somewhat residual value here. The frustrated typologist, after trying in vain to impose an accusative, ergative, or agentive character on a recalcitrant language, finally accepts the idea that its morphosyntax is determined by a different kind of logic than S/A, S/O, or A versus O pivots. It appears that the referential and/or semantic traits of the arguments may play a crucial role in clause structuring.[12]

Klaiman's inverse language type

Klaiman (1991, 1992) explicitly distinguishes "inverse system" from "inverse language type". Section 3 deals with her framework in greater detail, but some remarks are in order here.

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[12] A more recent example of this mainstream opinion is Pustet's (1997) functional typology of alignment systems (which she calls, following Seiler 1988, "participation systems"). Based upon the notion of discourse prominence, with the two basic functions foregrounding and backgrounding, Pustet's study also follows Comrie (1981) and Mallinson & Blake (1981) in distinguishing accusative, ergative, agentive ("split-S") and hierarchical ("obviation") as separate types.

The four properties of inverse systems are as follows (Klaiman 1992: 235f): First, argument referents are ranked according to what she calls ontological salience (roughly, set up on what Nichols labels person, animacy and/or gender categories). Second, predications are sensitive to this ordering by showing directionality, i.e. a verbal morphological opposition between predications where the salient referent acts upon the less salient one and those where it is the other way round. Third, inverseness involves all transitive predications or a well-defined system thereof, and is in this sense systematic. Finally, inverse clauses are transitive and therefore different from, e.g., detransitive passives.

Klaiman's inverse language type "appears to arise from a unique variety of structural organization whose primitives reside in ontological statuses (as opposed to grammatical or thematic relations)" (1992: 227). It consists of inverse voice, head-marking, and non-configurationality (1991: 165f). Inverse voice, as will become clear in the next section, refers to the inverse system just characterized. The head-marking feature is related to Nichols' observation in the sense that direction-marking patterns tend to correlate with this feature instead of, say, dependent-marking. Finally, non-configurationality refers to a rather flat clause structure connected to the disputable status of a VP constituent, and is typically associated with relatively free word order (cf. Hale 1973b and Jelinek 1984, 1987, 1990).

The debate on configurationality originally focused on relations of structural government, and Jelinek's work reinterpreted it in terms of an argument type parameter distinguishing (i) those languages where, roughly, external NPs are optional adjuncts and the arguments are personal markers affixed to verbs from (ii) languages where the external NPs are the arguments and personal markers on predicates are seen as cross-referencing or agreement morphology. Klaiman's reception of Nichols' (1986a) seminal article links configurationality to the head-marking versus dependent-marking parameter that focuses on relations of dependency. In her view, "inverseness is […] manifested by degrees of conformity to a type" (1991: 170), and the inverse type is non-configurational, pronominal argument, and head-marking—a type from which individual languages can and do deviate. According to Klaiman, "there is no formal behavior or set of formal behaviors found in every inverse language. […] The conformity of a language to the inverse type does not depend on its exhibiting […] any overt property" (1992: 227). This important issue shall concern us again at the end of Section 3.

3. Hierarchical alignment

We have seen so far that languages may display different marking patterns in different realms, both in syntax and morphology. Moreover, in a number of languages there appears to be a feature that cannot be described easily with Dixon & Aikhenvald's SAO model sketched in Section 1—a feature that can be seen as leading to a further language type and is, therefore, worth examining in greater detail: the hierarchical (Nichols) or inverse (Klaiman) type. In some languages, verb inflection bears a close relationship to what Bickel & Nichols (forthcoming) label INDEXABILITY HIERARCHY. In what follows I will take a closer look at both this hierarchy (§3.1) and at the relationship between direction and hierarchical alignment (§3.2).

3.1 Indexability hierarchies

Silverstein (1976) was the first to discuss extensively the fact that semantic and referential properties of nominals have an impact on case marking and agreement patterns in several Australian languages and Chinook, and subsequent studies have explored related issues in many other languages neither areally nor genetically related.[13] Pronouns, proper nouns, and common nouns can be seen as ordered on a great chain of being ranging from one or more of the S[peech] A[ct] P[articipant]s to abstract nominals. Many names for this hierarchy have been propounded in the literature, including "substantival", "animacy", "agency", "humanness", "empathy", "egocentricity", "generic topicality" and "ontological salience". Bickel & Nichols (forthcoming) have recently proposed the term "indexability" claiming that the other names do not capture all aspects of the hierarchy, whereas "its basic variable is the ease to which a referent can be identified—or 'indexed'—from within the speech act situation". I have adopted this term, and this view of the hierarchy, for the present study.

Nominals can be ranked according to many different principles, and I shall review only the most relevant ones here. Givón (1994, 1995, 1997, 2001) mentions an anaphoricity scale placing personal pronouns higher than lexical NPs. It may be useful to postulate a reference and an inherence hierarchy as well (Bossong 1985). In the former, definite nominals outrank indefinites, or entities identifiable by both SAPs are higher than those identifiable by the

[13] Case marking, agreement patterns and word order are customarily associated with the expression of interactions between two or more referents via transitive or detransitive clauses. An interesting but still insufficiently explored area that shall not be further addressed here is how the expression of possession and relations like kinship and others react to indexability hierarchies. Cf. e.g. Seiler (1982, 2001) for this issue in Cahuilla.

speaker only, and the latter are higher than those unidentifiable to both. The inherence hierarchy is defined along various semantic features like [±human], [±personal], [±kinship], [±animate], [±discrete] and [±concrete], but also gender (male > female), size (large > small), and age (adult > child). Grammatical categories like number and possession may also play a role (e.g., singular nominals outranking plural ones and possessors outranking possessed entities). However, at the core of the whole system of hierarchies appears to be a participant hierarchy that ranks SAPs higher than 3rd persons. A simplified combined indexability hierarchy is shown in (8):

(8) AN INDEXABILITY HIERARCHY

SAP > 3rd person pronoun > [+human] > [+animate] > [-animate]

The details as to which particular features are relevant and how grammar reacts to them show considerable cross-linguistic variation. Some languages further rank SAPs relative to each other, some of them 1 > 2 and others 2 > 1. Differential object marking is a grammatical reflex of the [±definite] and/or [±animate] distinctions for 3rd person objects, and split ergativity patterns where SAP pronouns align accusatively and 3rd persons show ergative alignment are a clear example of the division between SAP and 3rd persons.

The underlying rationale of an indexability hierarchy like the one depicted in (8) above appears to be somewhat elusive, even after nearly three decades of research. Whereas it is plausible that in some languages animate entities are portrayed as acting upon inanimates rather than the other way round, it is not self-evident why agentivity should be a privilege of entities associated with the speech act. DeLancey's view shall become clearer in Chapter II, but suffice it to say here that the notion of perspective is crucial in this respect: states of affairs are depicted as proceeding from one argument to another, and arguments higher on the hierarchy are more natural departing points than others. In this sense, SAPs would be more natural starting points than 3rd persons, which in turn would be more natural endpoints. Although some studies (Jelinek 1990 mentions empirical work like Wierzbicka 1981 and others) suggest that SAPs do not tend to be typical actors and 3rd persons typical undergoers when actual text counts are carried out, recent work by Dahl (2000) provides evidence in favor of a clear SAP-centered tendency in the syntax and discourse patterns of English and Swedish. Furthermore, Dahl mentions that notions like empathy and viewpoint (hallmarks of DeLancey's theory) fail to account for the majority of the cases in which SAPs appear to be prominent. Along different lines, Jelinek (1990) proposes a discourse-motivated asymmetry between SAPs and 3rd persons in that the former are always active (cf. Lambrecht 1994), unlike the latter, which have to be activated by verb-external material (NPs,

pronouns)—typically in S or O, but not in A, function. Further research on as many languages as possible in a vein similar to Dahl's is likely to contribute substantially to our understanding of these issues and is to be encouraged.

Let me conclude this subsection with yet another terminological point. Whenever there are two or more arguments involved, it may well be the case that none outranks the others, depending on the semantic and referential properties of the referents and the exact nature of the indexability hierarchy in a given language. For the case where one referent outranks or is outranked by others, Klaiman (1991, 1992) proposes the labels "ontological subject" for the argument that occupies a higher position in the hierarchy and "ontological object" for the lower in a transitive predication. However, there are two problems with these terms. First, the indexability hierarchies found in many languages include a pragmatic element in that referents that are more salient in a particular portion of discourse outrank others but neither referential nor semantic properties account for what is a purely pragmatic choice, and therefore the adjective "ontological" does not cover all possible cases. Second, as was mentioned when talking of primary arguments, the labels "subject" and "object" may be reasonably desemanticized, but they are potentially misleading because they might well imply some agentivity or control features that need not be present at all. Referents outranking others may be preferred actors, but this is only one possibility. Consequently, I will refrain from using these labels here and will refer to ranked referents simply by explicitly saying which one is higher and which one lower on the indexability hierarchy.

3.2 Alignment and direction

This subsection deals with various characterizations of hierarchical alignment found in the literature in order to ascertain the relationship between this pattern —rather, these patterns—and direction. It shall become apparent that, although they are intimately related, these phenomena are not the same.

Different but compatible views

In her study on nominal and personal marking patterns, Siewierska (1998) treats accusative, ergative, active and tripartite alignments on a par with what she calls hierarchical alignment, and defines the latter as follows:

> [I]n hierarchical alignment the treatment of the A and O is dependent on their relative ranking on the referential and/or ontological hierarchies. Whichever is the higher ranking receives special treatment, the details of which vary from language to language.
>
> (Siewierska 1998: 10)

Observe that this definition is fairly vague as to what the "special treatment" actually looks like. This is something that, as we have already noted above, is repeatedly mentioned in the literature: neither hierarchical alignment nor inverse systems can be defined structurally.

After what was said in §2.2 above, it is only natural that Nichols includes a "hierarchical clause alignment type" among her six morphological types (cf. (9) below) in her 1992 book. Furthermore, Nichols explicitly states the possibility of total neutralization of the functions S, A and O—her neutral type, one that is seldom mentioned, let alone addressed, in the typological literature. One might ask why bother with describing the absence of pattern if the discovery and explanation of pattern is what structuralist linguistics is all about. To the extent that the term "neutral alignment" is not too much of an oxymoron, this notion shall prove relevant in the course of this study.

(9) NICHOLS' CLAUSE ALIGNMENT TYPES (Nichols 1992:65f)

a) neutral: S=A=O, i.e., no inflectional oppositions
b) accusative: S=A, distinct from O
c) ergative: S=O, distinct from A[14]
d) three-way: S, A, O all distinct
e) stative-active: S_1=A, S_2=O (choice usually determined by the verb)
f) hierarchical

Mallinson & Blake (1981) describe their "relative hierarchical marking" in the following terms (1, 2 and 3 stand for 1st, 2nd and 3rd person, respectively):

> [I]n some languages the use of accusative and/or ergative marking is determined by the relative positions of A and O on an internal hierarchy of the general form [1 > 2 > 3 > proper > human > animate > inanimate, FZ]. 1 is usually at the top of the hierarchy, or sometimes 1 and 2 share the first position, and 3 is lower. Where other categories of nominal [sic] are involved the hierarchy runs from subclasses of human (personal proper names, kinship terms), through human in general, to animate, to inanimate. Not all points on the hierarchy are recognized in every language that displays relative hierarchical principles.
>
> (Mallinson & Blake 1981: 65)

Therefore, the position of the A and O arguments of a predicate along a

[14] Languages with ergative and accusative alignments due to TAM or person-based splits are regarded by Nichols as "primarily ergative", since "most ergative systems are split and hence the split is part of the definition of 'ergative'" (1992: 65).

language-specific hierarchy may influence the kind of case marking these arguments will take. But this is not the only possible effect:

> The Algonquian languages differ, however, from the ones to be described here in that they exhibit markers for the direction of the hierarchical distinction between A and O whereas the languages described below have ergative or accusative marking determined by the relative positions of A and O on the hierarchy.
>
> (Mallinson & Blake 1981: 66)

Crucially, in addition to or instead of case marking, a specialized marker can appear stating whether the ROLE HIERARCHY A > O and the indexability hierarchy are "aligned" or not—see Figure I-2 below:

Figure I-2
ROLE AND INDEXABILITY HIERARCHIES

On the syntactic side, role hierarchies (labeled "relational hierarchies" in Givón 1994, 2000) rank (i) actors higher than goals, and these higher than undergoers, and (ii) actors higher than primary objects (in the sense of Dryer 1986); here the relevant parameter seems to be volitional control of the action. I shall return to these role hierarchies several times in the course of this study.

What direction is all about: Some examples

Readers unfamiliar with the notions just presented may want to consider the following examples from some of the languages discussed in this study in order to better understand what is at the center of attention.

The sentences from Plains Cree (Algonquian, Chapter III) in (10) illustrate the opposition between direct and inverse clauses (characterized by the verbal suffixes *-ā* and *-ikw* in these examples, respectively). Since SAPs invariably outrank 3rd persons on the indexability hierarchy, SAP→3 configurations are always direct and 3→SAP interactions can only be inverse.

(10) PLAINS CREE DIRECT AND INVERSE CLAUSES

a. Ni-wāpam-**ā**-w.
1-see-DIR-3
'I see her.'

b. Ni-wāpam-**ikw**-w.
1-see-INV-3
'She sees me.'

With two equally animate 3rd persons, however, it may be the case that both direct and inverse clauses are available in order to describe a particular state of affairs. This is possible in Plains Cree but is exemplified by the data in (11) from Mapudungun (uncertain affiliation, Chapter VII), where the first clause is direct because a more prominent 3rd person (the proximate) both outranks a less prominent one (the obviative) and acts upon it. The second clause (with an *e*-marked verb in this example) states that the less salient 3rd person acts upon the more prominent one.

(11) MAPUDUNGUN DIRECT AND INVERSE CLAUSES

a. Mütrüm-fi-i-Ø.
call-3O-IND-3
'He$_{prox}$ called him$_{obv}$.'

b. Mütrüm-**e**-i-Ø-mew.
call-INV-IND-3-3A
'He$_{obv}$ called him$_{prox}$.'

The examples from Southern Tiwa (Kiowa-Tanoan, Chapter VI) in (12) show that the opposition direct for SAP→3 versus inverse for 3→SAP does not need to be marked as in Plains Cree: the direct clause is active and the inverse one passive (characterized by a different agreement prefix *te*-, the passive suffix *-che* and the oblique nominal marking *-ba*).

(12) SOUTHERN TIWA DIRECT AND INVERSE CLAUSES

a. Seuan-ide **ti**-mų-ban.
man-s 1sII(A)-see-PT
'I saw the man.'

b. Seuan-ide-**ba** **te**-mų-**che**-ban.
man-s-OBL 1sI-see-PASS-PT
'The man saw me.'

Finally, Nez Perce (Sahaptian, Chapter V) shows an unmarked clause for the 1→2 interaction and a marked clause for the 2→1 configuration (the suffix *-im* is a cislocative that has become obligatory and marks the inverse among SAPs):

(13) NEZ PERCE DIRECT AND INVERSE CLAUSES

a. Héexn-e.
see-PT
'I saw you$_s$.'

b. Hexn-**ím**-e.
see-CIS-PT
'You$_s$ saw me.'

A brief note on marking

Observe that Mallinson & Blake (1981) are vague as to how the direction markers operate. One possibility is that just as accusative or ergative case marking can show sensitivity to whether the lines in Figure 1 cross or not, accusative or ergative verb agreement may present a similar picture, i.e. a polynomial pattern. Another possibility is the one found in Algonquian languages: there may be a set of morphemes, in addition to the person markers, that are specialized for the notion of relative placing on the hierarchy of A and O. By the same token, DeLancey (who was not explicitly concerned with a general theory of alignment but with explaining verbal marking patterns in some Tibeto-Burman languages) argued in his work on inversion that

> [a]lso analogous to the [Tibeto-Burman] agreement pattern is the morphological category that has been called DIRECTION by Algonquianists. Direction marking, best known from the Algonquian languages but also attested elsewhere in North America as well as in a few Siberian, Australian, and Dravidian languages, marks a transitive verb to indicate the relative place of its agent and patient on the person hierarchy.
>
> (DeLancey 1981a: 85, emphasis in the original)

Finally consider Nichols' later definition of the hierarchical type:

> Access to inflectional slots for subject and/or object is based on person, number, and/or animacy rather than (or no less than) on syntactic relations. The clearest example of the hierarchical type in my sample is Cree. The verb agrees in person and number with subject and object, but the person-number affixes do not distinguish subject and object; that is done only by what is known as direct vs. inverse marking in the verb. There is a hierarchical ranking of person categories: second person > first person > third person. The verb takes direct marking when subject outranks object in this hierarchy, and inverse marking otherwise. In addition, verbs inflect differently depending on whether their S and O arguments are animate or not, a pattern which could be viewed as another instance of hierarchical agreement or as different conjugation classes (rather than hierarchical access to agreement slots).
>
> (Nichols 1992: 66)

Besides those elements shared with the other definitions presented so far, four things are noteworthy: (i) the notion of access to inflectional slots, already present in Nichols' 1990 definition, (ii) the notion of direction marking,

different from access to inflectional slots, (iii) the characterization of direction as a privative versus equipollent opposition,[15] and (iv) the fact that the person markers do not show different forms for S, A and O does not mean that Plains Cree displays neutral alignment. The second issue will be addressed in what follows. The third point will be discussed in some detail in Chapter II, and the fourth will occupy us in Chapter III on Algonquian.

Alignment and direction: Related but different phenomena

So far we have seen that the morphosyntax of a particular language may react in various ways to an indexability hierarchy, as shown in (14):

(14) REFLEXES TO THE INDEXABILITY HIERARCHY

a. Morphology
   • access to marking slots
   • marking of direction, i.e. direct and inverse

b. Syntax
   • access to syntactic functions

The question of whether these responses interact is not theoretical but empirical —what theories should do is explain the correlations or their absence. Observe that Nichols' characterization of hierarchical alignment rules out direction marking as the sole feature but explicitly considers access to marking slots, syntactic functions, or both.

It should come as no surprise that a given language may display direction-marking morphology irrespective of the way it defines and treats primary arguments in the rest of its morphosyntax. It may be any of the types shown in Table I-1 (accusative, ergative, agentive, double oblique) and additionally encode whether the role and the indexability scales are aligned or not, but this is not what Nichols is interested in. Instead, what is important here is the case where a certain language cannot be said to belong to any of those types without seriously misrepresenting its patterns.

By contrast, it seems that hierarchically driven access to marking slots calls for ancillary direction marking in order to achieve some degree of communicative efficiency. If the information on who does what to whom is not to be exclusively retrieved from context or thanks to discourse-configurational principles alone but has to be conveyed overtly, morphological slots and/or

[15] In this passage, a strict reading might suggest that direct is semantically marked ("when subject outranks object") and inverse unmarked ("otherwise"), but the rest of the discussion makes it clear that this is not the intended interpretation.

syntactic functions strictly unspecified for semantic content allow the addressee to identify the reference, but not the role, of the arguments involved. Disambiguation could be achieved through a direction-marking device such as the opposition of direct and inverse, but also through different paradigm sets—a possibility advocated for Tanoan languages and discussed in Chapter VI.

Notice that the above holds only if marking slots are unspecified for role, which obviously need not be the sole possibility. Access to morphosyntactic salience may be governed by both an indexability hierarchy and a relational hierarchy, in which case direction marking is not indispensable in order for the hearer to be able to map referents onto macroroles. We will come back to this issue when discussing Kiowa in Chapter VI.

Summary

This chapter adopts Dixon & Aikhenvald's alignment model as a heuristic device in order to explore alignment patterns in languages that deviate from the basic types customarily called accusative, ergative, agentive, and double oblique. This model distinguishes four functions: S (single actant with an intransitive predicate), A (actor or controlling argument with a transitive predicate), O (undergoer or affected argument with a transitive predicate), and E (goal / beneficiary / experiencer / stimulus argument). Whenever a particular construction targets one or more of these functions, this target is called PIVOT. A pivot recurring across several constructions is called PRIMARY ARGUMENT (of which a subject or generalized S/A pivot is a special case), which can be morphological, syntactic, or both. It is explicitly acknowledged here that (i) pivots are construction-specific, (ii) primary arguments in particular and syntactic functions in general can be diffuse rather than clear-cut, and (iii) all of these notions are best explored as though they were language-specific.

The following points will be of paramount importance in what follows:

- The morphosyntax of many languages is sensitive to an indexability hierarchy placing some entities above others. Typically, SAPs outrank 3rd persons, but also semantic (e.g. animacy), grammatical (e.g. possession or number) and pragmatic factors (e.g. discourse salience) can play a role. In these languages, the higher referent in a given interaction is privileged regarding access to morphological marking and/or syntactic functions.
- Direction reflects the alignment between the indexability hierarchy and a relational hierarchy where actors outrank undergoers. When the higher referent is an actor, a predicate or a whole clause is marked as direct. Inverse is the label used for constructions where the higher referent is an undergoer.

- Hierarchical alignment and direction are logically independent features that can, but need not, cooccur. A particular language may display verbal morphology that can be meaningfully described with the concept of hierarchical alignment alone, without there being direction marking. Similarly, the morphosyntax of a certain language may (i) be adequately described with a simple SAO model but (ii) allow for additional direction marking if there is no hierarchical alignment.

Chapter II
A theory of direction

> There are schools which appear to make use of similar methods but understand them quite differently. […] So you see that we must speak very cautiously about schools. They may do practically the same things but the result will be totally different.
> — P. D. Ouspensky, *In search of the miraculous*

In the preceding chapter I claimed that hierarchical alignment and direction were two intimately related but logically independent responses to indexability hierarchies found in the grammar of some natural languages; the present chapter articulates a theory in order to explore the latter phenomenon in greater detail. The first question to be addressed concerns the grammatical categories involved (Section 1), which is done against the background set by previous work. After arguing in favor of considering direction a category in its own right, I will deal with functional and formal issues of direction (Section 2).

1. Grammatical categories involved

In addition to the specific syntactic sense proposed by Manning and already sketched in §2.1 of the preceding chapter—the inverse grammatical relations—, the term INVERSION is customarily used in the context relevant for the purposes at hand in three competing senses. First, it is thought of as a value or property of the category of direction. This is the view originally forwarded in DeLancey's studies in the early 1980s, and the stance adopted in the present study. Second, it is seen as the (prototypical) description of a particular construction. This is the view adopted by scholars postulating structural differences between passive voice and inverse. Third, inversion is conceived as a particular value along a scale measuring the relative topicality of actor and undergoer. Studies in the vein of Givón (1994), but also recent optimality-theoretic work, hold this view—which features a functional, but no structural, distinction between passive and inverse. I present these positions in the subsections that follow.

1.1 Direction as a category of its own

DeLancey argued for two key notions, viz. attention flow (AF) and viewpoint, in order both to systematize the analysis of what Algonquianists traditionally call "thematic suffixes" and to show the intimate connection between some marking patterns in the Algonquian languages and similar phenomena found in other languages neither genetically nor areally related to Algonquian. The former notion is characterized as follows:

> Events have an inherent natural AF, which recreates the flow of attention involved in actually witnessing the event. […] Just as unmarked linguistic AF in a sentence describing a motion event is iconic, following natural AF from Source to Goal, so unmarked linguistic AF in a dative sentence is from giver to receiver, and in a transitive sentence is from agent to patient.
>
> (DeLancey 1981b: 630f)

Whereas natural attention flow is related to temporal sequence, linguistic attention flow roughly corresponds to information structure in the sense of linear ordering of predicate and arguments in a clause.

As to viewpoint, DeLancey says that

> [t]here are, a priori, several possible viewpoints from which such a scene can be described: the external viewpoint of a disinterested observer, and a viewpoint associated with each participant. […] [L]anguages allow—or require—a speaker to specify which of these viewpoints he is taking in reporting an event, and that grammatical and lexical mechanisms exist, presumably in all languages, for specifying the viewpoint of a sentence.
>
> (DeLancey 1981b: 635)

Thus, both attention flow and viewpoint can be either natural or linguistic, and it is the alignment or misalignment between them that is at the center of attention here. Based upon these concepts, DeLancey articulates the key notion of direction as belonging to the realm of deixis:

> A number of languages use a different mechanism for marking the identity or non-identity of natural viewpoint and natural starting-point—coding it directly on the verb, rather than marking on NP's. […] The essential feature of a direction-marking system is that the verb in a transitive sentence is morphologically marked when P [the undergoer, FZ] is an SAP and A [the actor, FZ] is not. This is called

> the inverse configuration. Some direction-marking languages also mark the direct configuration, in which A is an SAP and P is not. Some also have distinct marking for 1st person A→2nd person P, or for 2nd A→1st P, or both; others class one of these as direct, the other as inverse.
>
> (DeLancey 1981b: 641)

As argued in Zúñiga (1998), the most commonly discussed deictic domains, viz. space, time, and person, can be seen as either static or dynamic. Static deictics typically point at an entity, e.g. English *here* (space), *then* (time) and *we* (person). Dynamic deictics, on the other hand, point at a movement in space (*hither*), developments in the course of time (*from now on*), or events that take place between persons ("I-him"). The latter category, dynamic personal deixis, or perhaps more adequately actional deixis, is what can be labeled direction. This simple taxonomy is shown in Table II-1:

Table II-1
A SIMPLIFIED TAXONOMY OF DEIXIS

	Static	Dynamic
Space	*here, this, ...*	*hither, away, ...*
Time	*yesterday, now, ...*	*until today, from now on, ...*
Person/Action	*I, you guys, ...*	"he-me", "you-us", …

There would be much more to be said about DeLancey's discussion of individual languages, and the reader is referred to his early studies (1980, 1981a, 1981b, 1982) for more details. This brief sketch should, however, suffice to illustrate the simple but important point that in this view direction is essentially deictic. This means that its yield is indexical: it points to something, in this case to the admittedly rather abstract notion of direction in which a state of affairs flows—not spatially or temporally, but in terms of the action that takes place between two or more arguments.

The idea that direction is related to a specific clause meaning rather than to a particular morphosyntactic instantiation thereof is fundamental in this view. The basic opposition between a direct and an inverse clause is based upon alignment and misalignment of the role and the indexability hierarchies introduced in Chapter I. This was schematically represented in Figure I-2 above, and is repeated below as Figure II-1 for convenience:

Figure II-1
ROLE AND INDEXABILITY HIERARCHIES

1.2 Direction as constructions related to voice type

Although the grammatical category of voice has been known since antiquity, a number of scholars have questioned not only many details but also some fundamental issues of the Euro-centric voice models, at least since the early 1970s, because the traditional frameworks fail to adequately describe voice alternations found in languages of the Americas and Australia, and the Philippines. I will limit myself in this treatment of voice constructions to two approaches that explicitly deal with direction, viz. Klaiman's and Dixon & Aikhenvald's (Croft's 2001 framework will be dealt with in Chapter VIII).

Pragmatic voice: Klaiman (1991)

Klaiman defines voice as a "category encoding alternations in the configurations of nominal statuses with which verbs are in particular relationships" (1991: 261) and propounds the following typology of voice systems:

(1) KLAIMAN'S VOICE TYPES

a. Basic voice: distinguishes middle from active based on the value of the feature "participant status of subject", which roughly means whether the actor is seen as affected by the action or not.

b. Derived voice: distinguishes passive and antipassive from active based on the remapping between the syntactic roles subject and object and the macroroles A and O.

c. Pragmatic voice:
   c1) Focus subtype: Philippine languages, based on the informational salience of the arguments, and
   c2) Inverse subtype: the direct-inverse opposition, based on the ontological salience of the arguments.

In Klaiman's view, "[a]ny voice system seems to make reference to some scale or relative ranking of nominals according to their assigned statuses at a relevant or applicable level of grammatical organization for the given system" (1991: 261).

The above characterization of inverse voice, like other similar definitions, leads to the problem of telling inverse and passive constructions apart, since they may be seen as having a common functional yield, viz. the foregrounding of the undergoer. Klaiman distinguishes them on the following grounds (1991: 183f): (i) passives reduce the valence of the predicate but inverses do not; (ii) analyses of truly inverse constructions as passives are unnecessarily complex and must therefore be avoided, and (iii) whereas passivization of a clause does not alter its propositional content (*the man scared the woman* versus *the woman was scared by the man*), inversion does (the equivalents would be: direct *the man scared the woman*, inverse *the man was scared by the woman*).

Referential status of arguments: Dixon & Aikhenvald (1997)

These authors propose a framework that distinguishes four basic types of "syntactic derivations and associated construction types which relate to predicate arguments" (1997: 71):

(2) DIXON & AIKHENVALD'S CONSTRUCTION TYPES

a. Argument-transferring ("voice"): antipassives, passives, causatives, and applicatives; here arguments are removed from, or added to, the core of transitive constructions.

b. Argument-focusing: Philippine-like clause types; transitivity is not altered, and different constructions focus on different types of argument.

c. Argument-manipulating: non-subjects are brought into surface subject position but do not have all properties of prototypical subjects in the language.

d. Marking the referential status of arguments: directs and inverses; different construction types are distinguished depending on the potential to control the activity of different core arguments.

Note some differences between Klaiman's taxonomy and Dixon & Aikhenvald's: first, the latter authors do not treat middles as belonging to a distinct type.[1] Second, the system found in Philippine languages constitutes a type of its own here, which is distinguished from the direction-marking systems

[1] Cf. Dixon & Aikhenvald (2000: 11f) for a terminological discussion of middles.

(d). Finally, there is an additional type not present in Klaiman's typology, viz. the argument-manipulating type. In addition to some English examples like *the Beyer microphone recorded Ravi Shankar well*, the North Arawak language Tariana is said to show constructions of this type. Since this will be relevant in the later discussion, let me briefly illustrate the difference between the passive and the argument-manipulating constructions in this language.

In Tariana, verbs cross-reference actors regardless of transitivity by means of a prefix, and pronominal NPs in "nonsubject" function are marked by *-na*. Passivization (i) intransitivizes a transitive predicate (which takes the simulfix *ka-…-kana* and is followed by an auxiliary that carries the personal inflection), (ii) promotes the original O to S_A function, and (iii) demotes the original A to an optional oblique:

(3) TARIANA PASSIVE CONSTRUCTION (Dixon & Aikhenvald 1997:92)

a. Hanupe itʃiri wa-inu-mhade.
many animal 1pA-kill-FUT
'We'll kill many animals.'

b. Hanupe itʃiri **ka**-inu-**kana**-mhade **nā** (wa-na).
many animal PASS-kill-PASS-FUT 3pS_A:AUX 1p-NSUBJ
'Many animals will be killed (by us).'

By contrast, the argument manipulating construction (i) applies to both transitive and agentive intransitive clauses, (ii) promotes a nonsubject NP with regard to some, but not all, subject properties, (iii) does not change the transitivity of the predicate (which takes an argument-manipulating suffix *-ni* and a classifier suffix that marks the semantic class of subject), (iv) maintains the other original argument NPs, and (v) maintains the original pronominal prefix cross-referencing the actor:

(4) TARIANA ARGUMENT-MANIPULATING CONSTRUCTION (Dixon & Aikhenvald 1997:93)

a. Ha-hipe nu-phu-se-ka pi-na.
DEM-land 1sA-sell-PFV-DECL 2s-NSUBJ
'I sold this land to you$_s$.'

b. Ha-hipe nu-phu-**ni**-**hipe**-se-ka pi-na.
DEM-land 1sA-sell-NI-CL-PFV-DECL 2s-NSUBJ
'This land, I sold it to you$_s$.'

In (4), the original O *hahipe* 'this land' is promoted to subject with respect to clause-initial position (word order being fairly free but favoring AOV) and to a property not seen here, viz. coreferential argument omission in coordination. As

seen in (4b), it is further cross-referenced by the classifier *-hipe* (in this case identical with the head of the NP). However, and unlike passive derived subjects, it cannot feed the switch-reference constraint, so promotion is not complete.

When compared to basic active transitive clauses, argument-manipulating constructions (i) are seen as derived, (ii) alter the grammatical relations, and (iii) do not to pay special attention to the matter of control. The basic function of this construction is "to mark a constituent which is more topical than the underlying subject, within the section of discourse in which the clause occurs" (1997: 94). I will return to this characterization shortly.

Dixon & Aikhenvald's criteria for telling passives from inverses are the following (1997: 100f): (i) while passivization reduces valence, inverse does not; (ii) the syntactic functions of the arguments are changed by the passive construction but left unaltered by the inverse construction; (iii) active can be considered syntactically basic and passive derived, whereas direct and inverse are equally marked from a syntactic perspective (although they may differ as to formal markedness), and (iv) both inverse and direct constructions indicate which argument is in control of the activity, but since passives suppress actors from the clause core, they also eliminate the information about the controller of the activity.

The primacy of structure

These two approaches think of direction as orthogonal to grammatical relations and valence-changing syntactic processes. Because inversion is by definition neither promotional nor demotional, intermediate cases like promotional inverses or passives governed by the arguments' referential status are not easily accommodated in Klaiman's framework. Dixon & Aikhenvald's typology, on the contrary, includes the argument-manipulating construction as a nonsubject-topicalizing device that alters grammatical relations basically without changing transitivity (except in some English constructions), but it appears that the Tariana *ni*-construction can hardly be considered an example of inverse grammatical relations. Although this type represents an interesting and welcome extension of the type inventory, the question of the intermediate cases mentioned above is left unresolved.

It goes without saying that a thorough critique of these typologies lies beyond the scope of the present study, since it would amount to postulating a full-fledged alternative theory of voice. However, I believe that the treatment of direction in the frameworks just reviewed does not do justice to the complexity of the phenomenon. Constructions tend to be language-specific in such a way that a meaningful classification based upon structural similarities may often be quite a challenging task. Rather than to claim that such cross-linguistic

comparison is useless or uninteresting, I want to argue that approaching form-function correspondences from the perspective of structure alone might obscure the functional resemblances—a point made by Givón and other scholars, as we will see shortly. In effect, the topicalization of undergoers may be seen as the function of structures as dissimilar as the English passive, the Tagalog goal-focus form, the Tariana argument-manipulating construction and the Plains Cree inverse.

In other words, the analyses proposed here are concerned with structural issues in such a way that functional aspects appear rather in the background. Let me now turn to the alternative view, where function is placed at the center of attention and structure is comparatively peripheral.

1.3 Direction as functions related to voice type

Inverse as function: Givón et al.

Based upon work by, among others, Cooreman (1982, 1985, 1987, 1988) and Cooreman et al. (1984), Givón (1994, 1995, 2001) and other scholars adopt a different stance from the other two seen so far. Givón prefers to work with a functional continuum rather than with discrete, structurally distinct pigeonholes and defines the three main prototypes of what he calls detransitive voice (with the active-direct construction as reference point) in intentionally vague terms:

(5) GIVÓN'S DETRANSITIVE VOICES (Givón 1994:9)

a. Inverse: the undergoer is more topical than the actor, but the actor nevertheless retains considerable topicality.

b. Passive: the undergoer is more topical than the actor, and the actor is extremely nontopical ("suppressed", "demoted").

c. Antipassive: the actor is more topical than the undergoer, and the undergoer is extremely nontopical ("suppressed", "demoted").

Thus, the relevant parameter is relative topicality of actor and undergoer. No structural features can be invoked to tell these constructions unequivocally apart, but text counts provide two measures that are said to correlate with topicality and have been used in many studies at least since Givón (1983): referential distance and topic persistence.

In the eighty-odd pages Givón (2001) devotes to detransitive voice, he makes the status of inversion unmistakably clear. A "prototypical transitive event" is one in which a volitional, controlling, active, and initiating agent is responsible for a telic, perfective, sequential, and realis event that "involves a non-volitional, inactive, non-controlling patient that registers the event's

changes-of-state" (2001[II]: 93). So-called primarily semantic detransitive voice constructions may decrease (i) the agentivity of the actor, (ii) the affectedness of the undergoer, and/or (iii) the telicity or perfectivity of the predicate. These are: reflexive, reciprocal, middle, and adjectival-resultative. On the other hand, so-called primarily pragmatic detransitive voice constructions do not alter the semantic parameters just mentioned but "render the same semantically-transitive event from different pragmatic perspectives" (2001[II]: 93). These perspectives, as we have seen, differ along one parameter, viz. relative topicality of both arguments.

Givón conceives the active-direct as the unmarked option, and he clearly states that inversion represents a detransitivization. I will not further pursue the question whether demotional operations like passivization and antipassivization are best thought of as "primarily pragmatic" departures from the prototypical transitive event, but I fail to see the sense in which the inverse is less transitive than the active-direct if "the semantics of transitivity is not affected in [this construction]" (2001[II]: 93). Although Givón does not explicitly say so, he seems to have some "pragmatic" definition of transitivity in mind, according to which either any departure from the case where the actor is somewhat more topical than the undergoer is a detransitivization as a matter of definition, or DeLancey's notions of viewpoint and attention flow come into play in order to identify the unmarked construction and those that depart from it.

Givón's detransitive voice framework shows a continuum in the form of the relative topicality cline passive > inverse > active > antipassive, but the parameters along which inverse constructions vary are basically unordered. First, Givón (2000: 91f) asks whether in a given language there is semantic (obligatory) inversion, pragmatic (optional) inversion, or both. Second, he asks whether there are voice-marking morphemes on the verb, pronominal affixes on the verb, and/or case-markers on NPs. Third, inverses can be promotional (the topical O can be promoted to subject) or non-promotional (grammatical relations are unaltered by inversion). Fourth, inverses can be morphological or encoded by word order.

Inverse as function, but with structural clues: Thompson (1994)

Albeit similar to Givón's, Thompson's framework is technically more rigorous and in fact closer to Dixon & Aikhenvald's taxonomy. Thompson sees direct and inverse as pertaining not to voice, but to a direction system, and their opposition as "a functional distinction that is expressed through language specific structures" (1994: 62). He presents some "structural clues" that may be indicative of inverse, rather than of passive, constructions: (i) inverse morphology is obligatory in 3→SAP configurations; (ii) case marking is the same as in active/direct clauses; (iii) the verb remains transitive and active; (iv)

other non-A's beside the O may be affected, and (v) there is a special morpheme for the direct as well as for the inverse. The functional characteristics specific to inverses are: (i) the A is not suppressed, and (ii) the non-A is more topical than the typical non-A in an active-direct clause.

However, "[e]ach of these structural diagnostics may be violated in a particular language" (1994: 62). In a passage often quoted by advocates of the primacy of function over structure, Thompson says:

> I know of no structural features which can define inverse constructions and distinguish them from passives. There are a few structural characteristics which are generally associated with inverse constructions. None of these structural characteristics in itself can be used as a decisive diagnostic, however.
>
> (Thompson 1994: 61)

Observe that already Givón (1981) had paved the ground for subsequent work by rejecting a structural definition of the passive and proposing a purely functional characterization. Instead of focusing on structural properties like A-demotion and O-promotion, passives are said to be defined in terms of three functional domains, viz. topicalization of the non-A, impersonalization (i.e. detopicalization of the A), and detransitivization of the predicate. Consequently, constructions that were A-suppressing or O-promoting were seen as special cases of the more general function "passive".

By contrast, Thompson follows Shibatani (1985) in claiming that passives are basically actor-suppressing. In fact, Thompson explicitly states that

> in general voice systems (active, passive, antipassive) are defined by the degree to which they suppress arguments, while direction systems (direct, inverse) are defined by the degree to which a non-agent has an increase in topicality over the normal non-agent.
>
> (Thompson 1994: 47f)

Nevertheless, Thompson says that "[i]f one looks at voice and direction from the point of view of relative topicality, the terms ACTIVE, PASSIVE, ANTIPASSIVE, DIRECT, and INVERSE may be insufficient" (1994: 48, emphasis in the original), particularly so in languages that show more constructions than just the five corresponding to these terms. Taking the active-direct voice as point of departure, with some given topicality value for both the actor and the undergoer, Thompson characterizes the detransitive voices with some subtypes, as in (6). The symbols ↑ and ↓ represent 'more topical than in the active-direct voice' and 'less topical than in the active-direct voice', respectively.

(6) THOMPSON'S DETRANSITIVE VOICES (Thompson 1994:48)

a.	A	O	active-direct
b.	A↑	O↑	
c.	A	O↑	inverse
d.	A↓	O↑	
e.	A↓	O	passive
f.	A↓	O↓	
g.	A	O↓	antipassive
h.	A↑	O↓	
i.	A↑	O	

Thompson defines his inverses and antipassives in (6) based upon the topicality of the O as compared to its basic value in the active-direct construction: the inverse is O-topicalizing (with three subtypes, depending on whether the actor is relatively topicalized or detopicalized, or remains unaltered) and the antipassive is O-detopicalizing (with three subtypes according to what happens to the actor). By contrast, the passive is defined as A-detopicalizing when compared with the active-direct construction. Observe that the construction exclusively specified for A-topicalization (i) in (6) does not fit any of these categories and therefore remains unnamed. This is consistent with the view expressed in an earlier study as to the primacy of function:

> Passives and inverse constructions overlap in their marking of a deviation from the normal topicality relationship between an agent and a non-agent. It is best to be concerned with the functions and typology of such constructions rather than to battle over terminology and strict classification.
>
> (Thompson 1989a: 269)

According to Thompson, one of the contributions of his studies (1989a, 1994) is to extend the term "inverse" from languages like Nocte or Plains Cree, where the distinction between SAPs and 3rd persons plays a crucial role, to languages like Koyukon, which show a distinction between 3rd persons only (an extension adopted also by Klaiman and Dixon & Aikhenvald). In fact, Givón and Thompson have repeatedly argued in favor of treating the referential, the semantic, and the pragmatic aspects of an indexability hierarchy on a par—unlike what DeLancey's definitions in §1.1 above imply, viz. that it is the SAP > 3 part that is criterial. Thus, the mainstream view consists of considering inverse any argument configuration where the undergoer outranks the actor on the following scale (3' represents a 3rd person outranking a different type of 3rd person, 3", be it on semantic or pragmatic grounds).

(7) INDEXABILITY HIERARCHY

SAP > 3' > 3"

Some languages like Nocte reduce it to SAP > 3, and others like Koyukon to 3' > 3", while still others like Plains Cree operate with all distinctions. The relevance of this point shall become clear in the next subsection.

1.4 The framework used in this study

We saw in §1.2 that Klaiman's and Dixon & Aikhenvald's typologies focus on the structural parameters of particular constructions and comment on functional correlates. By contrast, Givón's and Thompson's taxonomies (§1.3) focus on functional aspects in order to define voice types and comment on structural properties that are seen as interesting, but not criterial, parameters. Based upon DeLancey's view, I would like to propose an alternative to both treatments of direction in what follows.

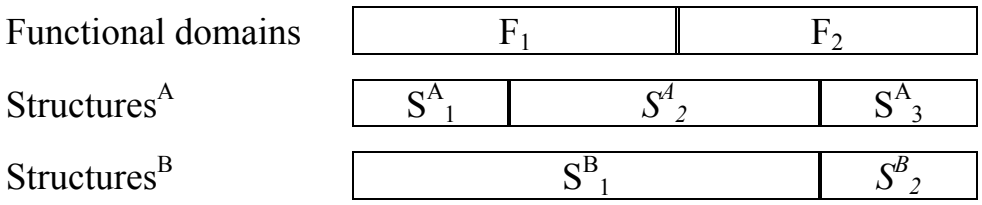
Beyond passive versus inverse

I concur with Dixon & Aikhenvald that Givón's terminology is dangerous. Labels traditionally used in order to refer to particular construction types—active, passive, antipassive, and inverse—are redefined so as to mean 'unmarked', 'actor-detopicalizing', 'undergoer-topicalizing' and combinations thereof. Thus, very dissimilar constructions are called passives if the indices said to correlate with topicality have the corresponding values. It should come as no surprise that the authors propound their own structure-based terminology since

> [w]ith this sort of cavalier deployment of terminology [i.e., Givón's, FZ], across construction types of quite different grammatical statuses, it is difficult to see how any generalisations that are put forward about 'passive', 'inverse' and the like can have interest or validity.
>
> (Dixon & Aikhenvald 1997: 108)

Nevertheless, I believe the basic strength of Givón's approach to be analytical rather than terminological; by shifting the focus from structural properties toward what Givón calls functional domains, interesting insights can be gained. Figure II-2 below, adapted from Givón (1981: 164), represents several correspondences between form and function in two languages A and B:

Figure II-2
FORM-FUNCTION CORRESPONDENCES



I follow Givón in assuming that at least some functional syntactic domains are best conceived as clines or functional continua, and represent two such clines as F_1 and F_2 in Figure II-2. Suppose these functional domains are expressed by the structures S^A_1, S^A_2 and S^A_3 in language A, and by the structures S^B_1 and S^B_2 in language B. Note that both S^A_3 and S^B_2 cover the same functional range, although the constructions may be fairly different in the two languages—in fact, it may well be the case that S^B_2 resembles S^A_2 structurally, a fact symbolized by both appearing in italics in Figure II-2. Although I agree that lumping dissimilar constructions together may obscure important aspects of the phenomena under study, I believe that both pieces of information are relevant: it is as interesting to note that two structures cover the same functional domain as to observe that two constructions are formally similar. While I am not claiming that the situation depicted in Figure II-2 above is the default or the most common case, I would like to argue that it is the quirky form-function correspondences that pose real descriptive challenges and therefore deserve special attention.

The taxonomies under discussion have a common trait, however: passives and inverses compete with each other. Be it on structural or on functional grounds, the approaches aim at answering, among others, the question: is construction X in language A a passive or an inverse? Whereas valence-changing operations can be seen as opposed to direction-marking patterns, I fail to see why this is the best option—in fact, much of the following chapters is devoted to showing that regarding them not as opposed but as (at least in principle) independent is more illuminating. I have chosen to analyze the different patterns addressed in this study treating direction as something related to, but different from, voice. In other words, I rephrase the above question as: has construction X in language A an inverse meaning? If so, is it also a passive, or passive-like structure?

This means that there are three steps to be taken. The first step is to identify and describe language-specific constructions and their functions, taking structural similarities and differences across languages into account. I follow studies in the vein of Dixon & Aikhenvald's in regarding valence-changing operations like passivization, causativization, and the like as belonging to this realm. Second, functional domains and their structural correlates are to be

recognized and characterized. I follow Givón and the other scholars who work in this tradition in recognizing A-detopicalization, O-topicalization, and the like as such functional domains. Third, meanings like the deictic opposition between an action directed toward a referent outranking most others on an indexability hierarchy and an action directed toward a referent that is outranked by most others on the same hierarchy are to be identified and described as well. I treat direct and inverse as belonging to this separate realm.

Observe the different constructions represented schematically in Table II-2 below (for expository purposes, I have employed the traditional labels instead of the more abstract "primary argument", "secondary argument", and the like to refer to the syntactic functions, but it should be understood that they are language-specific). They are defined basically along syntactic parameters, the first three of the latter being subtypes of A-demotion (A-suppression, oblique A, and object A) and the following two being subtypes of O-promotion (near-subject O and subject O). The last parameter (stativization) is rather complex because it may include semantic and syntactic subparameters (cf. Hopper & Thompson 1980), but it is usually encountered in the definition of voice types.

Table II-2
STRUCTURAL PROPERTIES OF SELECTED CONSTRUCTIONS

	A⇒Ø	A⇒Obl	A⇒Obj	O⇒Subj*	O⇒Subj	stativization
Active	—	—	—	—	—	—
$Passive_1$	+	—	—	—	+	+
$Passive_2$	—	+	—	—	+	+
$Passive_3$	+	—	—	—	—	+
Argument-manipulating	—	—	—	+	—	—
"Remapping"	—	—	+	—	+	—

Several different passives can be identified by noting their syntactic properties: All of them are A-demoting, but they differ as to whether the actor is completely suppressed ($Passive_1$, the "agentless passive") or only demoted to an optional oblique ($Passive_2$, the "prototypical passive"); in addition, it might be the case that the undergoer is not promoted ($Passive_3$, the "impersonal passive"). Dixon & Aikhenvald's argument-manipulating construction is characterized by the fact that the verb is not stativized and the actor is not (clearly) demoted, while the undergoer appears to be promoted to an in-between status between object and subject. Finally, the construction I have temporarily called "remapping" here, which will play an important role later on, alters the mapping of the grammatical relations to the macroroles neither stativizing the predicate nor reducing its valence.

It is easy to postulate plausible functional correlates of these properties, at least as working hypotheses. Syntactic demotion is likely to express detopicalization, and promotion most probably conveys some kind of topicalization. Therefore, all the constructions depicted in Table II-2 are serious candidates for A-detopicalizing and/or O-topicalizing structures.

However, direction might be present in a number of ways because it is not necessarily related to a particular structure (even though it may be linked to a specific topicality relation between the arguments). If inverse is defined as a "lower" referent acting upon a "higher" one, it is apparent that all constructions in Table II-2 might express this meaning—although it is unlikely that a given language shows as many different constructions. Unlike Dixon & Aikhenvald, who see the direction opposition as merely distinguishing two types of active constructions, but also unlike Givón, who sees the direction opposition as a difference in (de)topicalization degree regardless of structural properties, I have chosen to view the direction opposition in the present study as a meaning that can be expressed by a variety of constructions and may correlate with different topicality relationships.

If Givón is on the right track, then the present study simply ignores his functional parametrization and explores morphosyntactic details in order to cast some light on the structure of more or less promising candidates for pragmatic detransitive voice constructions. Those readers who want to go beyond mere structure are then referred either to the studies along Givón's lines already available or to those that will appear in the future, but I hope they will have gained deeper insight into the structural diversity of the phenomenon. If, on the other hand, Givón's proposal turns out to prove less powerful than accounts along the lines of Klaiman's or Dixon & Aikhenvald's, a contribution focusing on structural properties will be all the more useful since current structural taxonomies say little about different subtypes of inverse. In my opinion, it is sound to identify as many structural diagnostics as possible in order to better understand the different constructions. Eventually, discourse analyses like the ones proposed by Givón may provide additional insights as to the semantic and pragmatic yield of competing structures.

Direction and voice

It is obvious that the answer to the question of combinability presupposes at least some consensus as to the formal and functional definitions of the terms. Although the preceding discussion has made clear that there is some disagreement as to the definition of PASSIVE, most structure-oriented studies assume a prototypical notion to be useful. Prototypical passivization is usually thought of as a detransitivizing morphosyntactic operation used in order to

demote actors, promote undergoers, or both.[2] By contrast, the inverse is normally understood as a transitive construction, either the only available one in case of core(-semantic) direction or as the undergoer-topicalizing option in case of pragmatic direction. Functionally, then, but especially structurally, passives should differ from inverses. Givón's approach gives a similar answer. Since for him the difference between passives and inverses is one of degree, a given construction is either passive if the actor is "extremely demoted", inverse if it is not, or in between if the analyst is unable to decide. It cannot possibly be both at the same time.

In the present study, direction and voice are conceived as two logically independent dimensions, and therefore there is no possible overlap. In principle, there may be voice operations without direction and direction oppositions without voice. But if a language conflates both dimensions, the passive construction might be used in order to encode inverse direction, and if the passive is both demotional and promotional, these syntactic features may go hand in hand with the deictic value of the construction. This is similar to one of Givón's (1994, 1995, 2001) parameters, viz. "promotional" vs. "non-promotional" inverses, but note that here it is closely related to the locus of marking—an issue that shall be discussed further shortly and in §2.2 below. The double-marking strategy will apply in case direction is concomitant with voice and the passive is marked both on the verb (e.g., by means of a passive affix) and on the nominals (e.g., subject marking on the promoted O and oblique marking on the demoted A). Some possibilities are depicted in Figure II-3:

Figure II-3
SELECTED VOICE AND DIRECTION COMBINATIONS

	Pattern 1		Pattern 2		Pattern 3	
	direct	inverse	direct	inverse	direct	inverse
active	{ α }		α	—	α	β
passive	{ β }		—	β	γ	—

First, a language may lack grammaticized direction and the oppositions trivially blend into the voice system (pattern 1). Alternatively, a language could exhibit a one-to-one correspondence between the active and the direct on the one hand and the passive and the inverse on the other (pattern 2). In such a

[2] Cf. Van Valin (1980), Siewierska (1984), Shibatani (1988) for more on PASSIVE as a cross-linguistic term. Andersen (1990, 1991) adopts a different position in arguing against the cross-linguistic validity of PASSIVE if defined structurally and/or prototypically.

system, if the passive is demotional the inverse will be so as well. Finally, in the textbook account of inversion (pattern 3), both direct (α) and inverse (β) are active, and there is a demotional passive that typically suppresses the actor (γ).

The inquisitive reader may object that, since the passive is structurally predestined to be undergoer-topicalizing, it makes little sense for the grammar of a language to additionally have a direction opposition: the inverse would be redundant. Nevertheless, there are some reasons why such systems may and actually do exist. First, the passive is not only undergoer-topicalizing but usually also undergoer-promoting, which means that the O can feed e.g. S/A syntactic pivots otherwise inaccessible to it. Second, such passives are actor-suppressing more often than not, and therefore there is a functional opposition between an inverse that retains two surface arguments and a passive that shows only one. In fact, the question is why a language has an inverse and a passive instead of two different passives. I shall briefly return to this interesting issue after examining existing systems, in Chapter VIII.

The formal expression of direction

Let me make a remark on the relationship between marking locus and direction before presenting the analytical tools utilized in this study in order to explore the category of direction in natural languages.

We saw in §2.1 of the preceding chapter that split case systems may have a variety of underlying rationales—among others, sensitivity to an indexability hierarchy. As noted by Aissen (1999: 705), Silverstein's 1976 article and DeLancey's studies in the early 1980s elaborate the idea that both person-based split case systems and direction systems are based on the same markedness relations related to the alignment of hierarchies shown in Figure II-1 above. Even though it need not be reflected in formal marking, a direct configuration is (syntactically) unmarked and an inverse one is marked. In fact, Aissen says the same markedness is expressed through case (dependent marking) or direction (head marking), although the examples she analyzes—Dyirbal and Nocte—differ with regard to a further interesting property. Whereas Dyirbal case marking works independently of the overall configuration (e.g., 3rd person A's are ergative and 1st person A's nominative regardless of the person of the O), Nocte predicates are marked for inverse only in some specific combinations of actor and undergoer (e.g., 1→3 interactions are direct and 3→1 configurations inverse).[3]

Summing up, Aissen explicitly conceives direction as a category marked on

[3] Silverstein (1976: 124f) follows Chomsky (1965) in calling such strategies "local" (individual NPs are case-marked regardless of macrorole and case marking of the other NPs) and "global" (case marking considers information on all core arguments).

the clause head. A person-based split case system is considered to be its dependent-marking correspondence. Plausible though this may seem, I would like to propose a different view here.

Some languages mark the gender of the arguments on nominals, others do so on the predicate, and still others mark both the dependents and the head for this category (among the ones discussed in the subsequent chapters, Algonquian languages are a case in point). By the same token, argument number may be marked on the dependents, the head, or both. With these and other categories, it is not customary to make a terminological distinction according to locus of marking. In the realm of morphological alignment mentioned in §1.1 of Chapter I, however, we encounter a different situation. Whereas terms like nominative, accusative, and the like habitually refer to dependent-marking (case), verb morphology (agreement) is labeled differently, with only some marginal examples of studies calling cross-referencing prefixes nominative or ergative. Even studies that utilize the label "accusative agreement" seldom term a 1sO suffix "accusative" or a 2pS/A prefix "nominative".

Since the main reason for the different treatment of gender and number as opposed to case and agreement is probably related to the history of linguistics and the vicissitudes of terminology rather than to conceptual considerations, I fail to see why such a situation ought to be reproduced with deixis in general and direction in particular. Consequently, I will not limit the usage of DIRECTION to the head-marking strategy of this category. Just as verb morphology can, but need not, be specialized for the expression of direction, nominal morphology may also be employed in order to convey the opposition between direct and inverse clauses.[4]

As far as person-based split case marking is concerned, this amounts to distinguishing two types of direction marking, summarized in (8) (formally unmarked cases appear in italics). The first type is represented by a language like Dyirbal, with an opposition between the marking strategy used for SAP→3 interactions (nominative-absolutive) and the one that appears with 3→SAP

[4] An early and intriguing note of such a "global" case system is found in Silverstein (1976: 129). The Northern Territory language Dalabon is reported here to mark actors with the suffix *-yi* in inverse clauses, i.e., those where the A does not outrank the O with regard to referential status. Nevertheless, Mallinson & Blake (1981: 14f) observe that the original source (Capell 1962) is not accurately quoted (e.g., erroneous page numbers, missing diacritics) and that Silverstein's analysis is not supported by the data. According to Nicholas Evans (p.c.), Dalabon *-yi'* (*-yih* in the practical orthography) marks instruments and A's with a tendency to appear more frequently with inanimate A's than with animates, but since it can also appear with 1st person pronouns—allegedly occupying the highest position on the indexability hierarchy—it is hardly a clear case of inverse marking. Further research, including corpus analysis, may shed additional light on the matter.

(ergative-accusative) configurations in such a way that marking does not depend on the referential status of both arguments. Dyirbal case marking expresses direction only epiphenomenally, since the underlying rationale governing case marking is not the relative, but the absolute, position of the arguments on the indexability hierarchy. By contrast, a language like Umatilla Sahaptin (Chapter V) also shows two different case marking strategies for the SAP→3 and the 3→SAP scenarios, but one of the markers does not occur elsewhere and can be said to depend on the referential status of both A and O (in boldface in (8) below). In this language, nominal direction marking is not epiphenomenal but the expression of a deictic category.

(8) TWO TYPES OF PERSON-BASED SPLIT CASE MARKING

a. Dyirbal
3(ERG)→3(*ABS*)
3(ERG)→SAP(ACC)
SAP(*NOM*)→SAP(ACC)
SAP(*NOM*)→3(*ABS*)

b. Umatilla Sahaptin (simplified)
3(*NOM*)→3(OBJ)
3(**ERG**)→SAP(OBJ)
SAP(*NOM*)→SAP(OBJ)
SAP(*NOM*)→3(OBJ)

2. Functional aspects of direction

In Sections 2 and 3, I employ some terms already in use in the literature complemented by a few new notions in order to articulate a model of direction. An overview of all the subcategories to be discussed shortly is given in (9):

(9) FUNCTIONAL ASPECTS OF DIRECTION

a. Focality: low-focal, high-focal (particular), non-focal (unrestricted)
b. Domain: local, non-local, and mixed scenarios / direction

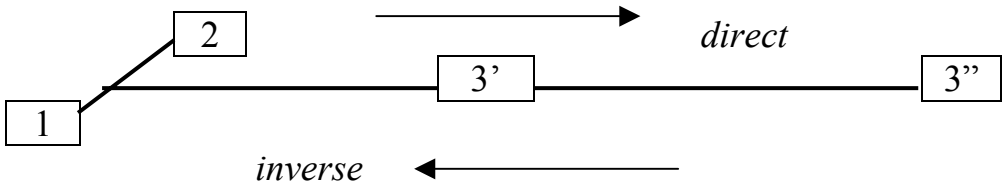
2.1 Direction focality

Low-focal direction

DeLancey (1981a, 1981b, 1982) envisaged direction as being primarily concerned with the step descending from those arguments participating in the speech act to those further down the indexability hierarchy (or ascending from the latter to the former). This is what I label LOW-FOCAL DIRECTION, and the binary opposition is between a LOW-FOCAL DIRECT and a LOW-FOCAL INVERSE.

This opposition can be appreciated in Figure II-4:[5] An indexability hierarchy consisting of the SAPs (1st and 2nd person) and the 3rd persons (a more salient one, 3', and a less salient one, 3") is represented on a two-dimensional plane with (i) the ordering SAP > 3' > 3" from left to right and (ii) the (at least in principle) unordered relationship between the SAPs.

Figure II-4
LOW-FOCAL DIRECTION I



The following examples from Plains Cree show the low-focal direct marker *-ā* appearing both with SAP→3' and SAP→3" configurations:

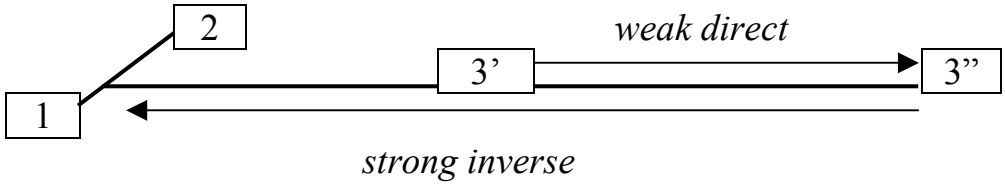
(10) PLAINS CREE LOW-FOCAL DIRECTION MARKER

a. Ni-sēkih-**ā**-w.
1-frighten-DIR-3
'I frighten him$_{prox}$.'

b. Ni-sēkih-*im*-**ā**-w-a.
1-frighten-SDIR-DIR-3-OBV
'I frighten him$_{obv}$.'

By the same token, a given language may distinguish whether the arguments are adjacent or not on the hierarchy. The first case can be termed WEAK DIRECTION and the latter STRONG, which in turn yields weak and strong directs and inverses, respectively. Observe the strong direct suffix *-im* in the preceding Plains Cree data and the general schema in Figure II-5:

Figure II-5
LOW-FOCAL DIRECTION II



[5] A very similar representation is found in, e.g., Hewson (1991) and Hockett (1993).

High-focal (particular) direction

Alternatively, it may be the case that the comment on the action is more specific, concerned with the overall picture but also with the particular persons involved, a pattern for which I suggest the term HIGH-FOCAL or PARTICULAR DIRECTION. The morphosyntax of a language may not merely mark adjacency and non-adjacency on the indexability hierarchy but also the exact combination of persons involved, e.g. '2→3' or '2s→1p'. To the extent that such specialized portmanteaus or constructions align with each other or with other direction markers, they are germane to our characterization of direction. For example, independent Miami-Illinois 1s→2p forms (a) show a local direction marker *-ele* that does not appear on conjunct forms (b), which take a non-focal marker *-el* and a high-focal suffix *-akok* instead.

(11) MIAMI-ILLINOIS HIGH-FOCAL DIRECTION MARKER

a. Ki-wāpam-ele-mwa.
2-see-1→2-2p
Both: 'I see you$_p$.'

b. Wāpam-el-**akok**-i.
see-2O-1s→2p-CNJ

However, this kind of pattern is not necessarily relevant to our present discussion. A case in point is the accusative person marking system of Hungarian. As seen in (12), subjects are marked on the verb irrespective of their position on the indexability hierarchy (a-c), but there is a specialized marking *-lAk* for the 1s→2 configuration:

(12) HUNGARIAN PERSON MARKING I

a. Lát-ok egy fiút.
see-1sI a boy:ACC
'I see a boy.'

b. Lát-om Ferit.
see-1sII F.:ACC
'I see Feri.'

c. Kint vagy-ok.
outside go-1sI
'I am going outside.'

d. Szeret-**lek**.
love-1sA:2O
'I love you$_s$.'

The difference between Sets I ("subjective / indefinite conjugation") and II ("objective / definite conjugation"), here represented by the 1s markings *-ok* and *-om*, bears relation to differential object marking (i.e. direct objects high in definiteness and/or animacy trigger a different marking) but is not restricted to it. Set II is used, roughly, if the undergoer is a proper name, definite, a pronoun belonging to the *-ik* class, or a demonstrative, as exemplified in (13):

(13) HUNGARIAN PERSON MARKING II: DEFINITE CONJUGATION

a. Péter lát-ja Annát.
P. see-3sII A.:ACC
'Peter sees Anna.'
(proper name DO)

b. Hoz-om a könyvet.
bring-1sII the book:ACC
'I bring the book.'
(definite DO)

c. Melyiket lát-od?
which:ACC see-2sII
'Which one do you$_s$ see?
(*ik*-pronoun DO)

d. Ezt lát-om.
this:ACC see-1sII
'I see this one.'
(demonstrative DO)

Observe that Set I endings occur with indefinite direct objects, but not only with these. Indefinite O's, interrogative pronouns, and SAP O's also require it:

(14) HUNGARIAN PERSON MARKING III: INDEFINITE CONJUGATION

a. Péter jól lát-Ø.
P. well see-3sI
'Peter sees well.'
(intransitive use)

b. Egy könyvet hoz-ok.
a book:ACC bring-1sI
'I bring a book.'
(indefinite DO)

c. Kit lát-sz?
who:ACC see-2sI
'Whom do you$_s$ see?'
(interrogative pronoun DO)

d. Valakit lát-ok.
someone:ACC see-1sI
'I see someone.'
(indefinite pronoun DO)

e. Ő engem szeret-Ø.
3s 1sACC love-3sI
'S/he loves me.'
(1st person DO)

f. Péter titeket vár-Ø.
P. 2pACC await-3sI
'Peter awaits you$_p$.'
(2nd person DO)

Whereas the 1/2→3 configurations have two possible verbal markings (Set I with X→3" interactions and Set II with X→3'), the 3→1/2 configurations allow only Set I markings. One local scenario is grouped together with these marking sets (2→1), the other being marked by *-lAk*. Therefore, the situation is the following:

(15) HUNGARIAN PERSON MARKING IV: PATTERNS

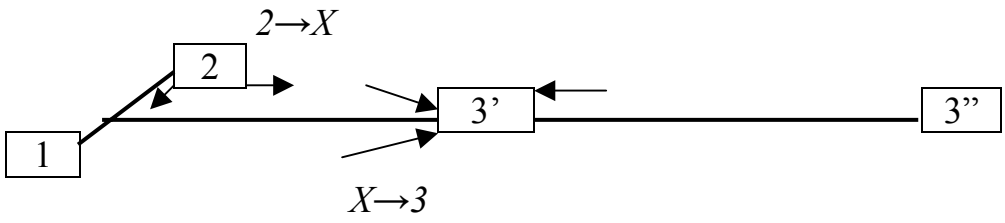
1/2→3'	1/2→3"	1s→2	2→1$^+$	3'→1/2	3"→1/2
α	β	γ	β	β	β
(Set II)	(Set I)	*-lAk*	(Set I)	(Set I)	(Set I)

The basic distinction between SAPs and 3rd persons can be said to be at best marginal in Hungarian verbal marking. Labeling α direct would imply that both 1/2→3" and 3'→1/2 are inverse, which is barely more meaningful than calling β direct. Rather, it is best to regard such a system as accusative with two special traits: the existence of differential object marking and the specialized 1s→2 form *-lAk*. This latter morpheme is a case of high-focal or particular direction, but a relatively uninteresting one in the present context since it does not pattern together with any other person-marking device found in the paradigm and there is no low-focal direction at all.

Non-focal (unrestricted) direction

A further possibility consists in being specific about only one of the arguments involved, in which case direction is fairly unspecified or, as I suggest calling this pattern, NON-FOCAL or UNRESTRICTED. This type of direction is represented schematically in Figure II-6 and exemplified with Miami-Illinois data in (16) below (here the 1O suffix *-i* occurring on dependent verb forms is highlighted):

Figure II-6
NON-FOCAL DIRECTION



(16) MIAMI-ILLINOIS NON-FOCAL DIRECTION MARKER

a. Wāpam-**i**-amint-i. 'He sees us$_e$.'
see-1O-1pINV-CNJ
b. Wāpam-**i**-t-iki. 'They see me.'
see-1O-3ANIM-3p:CNJ
c. Wāpam-**i**-ānk-i. 'You$_{s/p}$ see us$_e$.'
see-1O-1p-CNJ

The pattern to which probably most Western linguists are accustomed is, loosely speaking, Indo-European subject and object marking of the type 1s→X, 3p→X, X→2s, etc., where X represents virtually any person,[6] and they might

[6] Cf. Rhodes (1993) for a discussion of the gaps found in the paradigms of many languages

not feel inclined to invoke the notion of direction at all in this context. Nevertheless, there is a number of reasons why non-focal direction may prove rewarding as a descriptive tool.

First, note that so far I have considered only interactions between two arguments, but this assumption can be relaxed to accommodate cases in which e.g. morphology marking global direction is extended to intransitives. A case in point is inversion in Olutec, an obsolescent Mixean language of Veracruz, also known as Oluta Popoluca.

Olutec verb morphology is polynomial in an intricate way and only some bare essentials can be given here.[7] There is no nominal grammatical case; person markers are proclitics that come in three sets, as shown in (17):

(17) OLUTEC PERSONAL PROCLITICS I

	Set I	Set II	Set III
1	*tan=*	*ta=*	*tax=*
2	*min=*	*mi=*	*mix=*
3	*'i=*	*Ø=*	*ta=*

The examples in (18) illustrate how some of these clitics operate. A Set I marker like 1st person *tan=* represents the A argument in independent clauses (a) and the S/O argument in dependent clauses (b). Set II markers like 1st person *ta=* represent S/O arguments in independent clauses (c), and Set III clitics like *tax=* represent the A arguments in dependent clauses (d).

(18) OLUTEC PERSONAL PROCLITICS II (Zavala 1998)

a. **Tan**='ixkap-u=na je'=k Ma:wro.
1I=know-COMPL=still DEF=ANIM M.
'I still knew Mauro.'

b. 'I=ka'=wa:n'-u=k **tan**=mīn'-i.
3I=NEG=want-COMPL=ANIM 1I=come-INCMPL
'They did not want me to come back (lit. they did not want that I come back).'

c. **Ta**=nükx-pa tan=na:x-mü.
1II=go-INCMPL 1POSS=earth-LOC
'I am going to my town.'

(*1p→1s, *2s→2p, and the like).

[7] Since a whole chapter ought to be devoted to the treatment of such a system, the interested reader is referred to Zavala's (2000) comprehensive study.

d. Ka'=küx-u **tax**=kom-e-ːt-ütz je' koːxo.
NEG=finish-COMPL 1III=plant-INCMPL-pSAP-e DEF day
'We$_e$ did not finish planting it that day.'

Unsurprisingly, the inverse morpheme shows syntactic allomorphy as well: *-ü* occurs in independent clauses and *-j* or *-y* appear in dependent clauses (*-j* in the incompletive and *-y* in the completive). As can be seen in (19) with the transitive predicate *tzeːk-* 'scold', SAP→3 interactions are unmarked (a) while 3→SAP configurations take the inverse suffix (b).[8] Also observe that the verb takes only one proclitic although there are two arguments.

(19) OLUTEC INVERSION I (Zavala 2000:140)

a. Tan=tzeːk-küx-u ja'.
1I=scold-3p-COMPL 3ANIM
'I scolded them.'

b. Ta=tzeːk-küx-**ü**-w=ja'.
1II=scold-3p-INV-COMPL=3ANIM
'They scolded me.'

However, the inverse morpheme also appears with intransitives like *'it-* 'exist', as in (20). Notably, the inverse also occurs where there does appear to be only one entity, as in (c).

(20) OLUTEC INVERSION II (Zavala 2000:144f)

a. Ta='it-pa tüːyan-pi.
1II=exist-INCMPL hammock-LOC
'I am on the hammock.'

b. Ta='it-küx-**ü**-w yoxetumpa'-tük.
1II=exist-3p-INV-COMPL worker-p
'I had workers (lit. workers existed on me).'

c. *Ta=joːm-pa. c_2. Ta=joːm-**ü**-pa.
1II=sweat-INCMPL 1II=sweat-INV-INCMPL
Both (c_1 intended): 'I am sweating.'

Therefore, the Olutec inverse affix *-ü/j/y* might be termed (an arguably special type of) non-focal direction marker.

A second reason why non-focal direction is interesting is that an opposition between, say, 1s→(X) and (X)→1 is different from the opposition 1sS/A versus

[8] SAP→SAP interactions are somewhat different but need not be presented in detail here.

1sO. The former, if applied to intransitives and transitives alike, is something like an active pattern superimposed on whatever other alignment systems are present, whereas the latter is an accusative pattern. Finally, as we shall see in Chapter III, it may be the case that former low-focal direction markers become non-focal ones in the course of time, or the other way round.

Non-focal direction is found in some South-Central Dravidian languages (Steever 1993, Zúñiga 1998), where a verbal suffix *-ta* and its allomorphs mark interactions with SAP undergoers irrespective of the actor, but southern Quechuan languages show similar patterns as well. At first glance, Cochabamba Quechua marks SAP undergoers morphologically on the verb, further distinguishing between 1st person undergoer (*-wa*) and 2nd person undergoer (*-su*) (predictably, 3rd person undergoers are unmarked):

(21) COCHABAMBA QUECHUA SAP UNDERGOERS I (Kerke 1996:126,128,130)

a. Maylla-**wa**-nki.
wash-1O-2sS/A
'You$_s$ wash me.'

b. Maylla-**su**-nku.
wash-2O-3pS/A
'They wash you$_s$.'

c. Maylla-**wa**-rqa-yku.
wash-1O-PT-1peS/A
'You/he/they washed us$_e$.'

However, Cochabamba Quechua is actually more complicated than this. Whereas *-wa* occurs in all person configurations and is therefore a genuine 1O marker, *-su* appears only with a 3sA in some tenses and aspects. In the present, a 3s→2 portmanteau *-sunki* (cf. *-su* and *-nki* '2sS/A') appears, and 1→2 forms take portmanteaus in all tenses and aspects as well: *-yki* (identical to the 2nd person possessive suffix in the nominal paradigm, e.g. *wasi-yki* 'your$_s$ house') for 1s→2, and *-yku*, the same suffix encoding simply 1peS/A, for 1p→2:

(22) COCHABAMBA QUECHUA SAP UNDERGOERS II (Kerke 1996:130f)

a. Maylla-**sunki**.
wash-3s→2
'He washes you$_s$.'

b. Maylla-**su**-rqa.
wash-2O-PT
'He washed you$_s$.'

c. Maylla-**yki**.
wash-1s→2
'I wash you$_s$.'

d. Maylla-**yku**.
wash-1p→2
'We$_e$ wash you$_s$.'

e. Maylla-rqa-**yki**-chis.
wash-PT-1s→2-2p
'I washed you$_p$.'

f. Maylla-**su**-rqa-chis.
wash-2O-PT-2p
'He washed you$_p$.'

It seems that the 3s→2 suffix *-sunki* and the 1O morpheme *-wa*, both found in other Quechua varieties as well, were the origin of the reinterpretation of the element *-su* as '2O', albeit still somewhat defectively in Cochabamba Quechua. Table II-3 below shows the morphology for configurations with 2nd person undergoer in the comparatively conservative Cuzco Quechua and the morphology found in two Bolivian Quechua varieties, viz. Cochabamba and the geographically very close and, for our purposes, rather progressive Norte de Potosí (*-ku* is a pluralizer for persons that do not include the addressee, and *-chis* pluralizes 2nd persons):

Table II-3
SOUTHERN QUECHUA 2O MARKING (PRESENT)

	Cuzco	Cochabamba	Norte de Potosí
1s→2s	-yki	-yki	(-**su**)-yki
1p→2s	-yki-ku	-yku	-**su**-yku
1s→2p	-yki-chis	-yki-chis	(-**su**)-yki-chis
1p→2p	-yki-ku	-yku	-**su**-yku-chis
3s→2s	-sunki	-sunki	-sunki
3p→2s	-sunki-ku	-**su**-nku	-**su**-nku
3s→2p	-sunki-chis	-sunki-chis	-sunki-chis
3p→2p	-sunki-chis	-sunki-chis	-**su**-nku-chis

from Kerke 1996: 132

Clearly, the element *-su* has been reinterpreted in Cochabamba Quechua with 3rd person plural actors, but it is in the Norte de Potosí variety that this reinterpretation has spread to the 1st person actor forms (although it is optional with 1sA and obligatory with 1pA).

As a final point, note that there is usually at least one important restriction to this kind of marking: it seldom occurs on reflexives, which would logically require them. In other words, they are not absolutely but only relatively unrestricted in the sense that languages may choose to impose a ban of non-coreferentiality of actor and undergoer for them to apply, at least in the case of SAPs. However, this does not have to be the case; Olutec reflexives and reciprocals invariably occur with some allomorph of the inverse morpheme:

(23) OLUTEC INVERSION III (Zavala 2000:203)

a. Je:p min=ni-yu:k-a'ne-**j**.
there 2I=REFL-hide-IRR-INV
'You$_s$ are going to hide yourself there.'

b. Tuka-nak Ø=ni-tajiy-**ü**-w na꞉x-pa't-pi.
turtle-DIM 3II=REFL-bury-INV-COMPL soil-under-LOC
'The little turtle buried itself under the soil.'

A preliminary comment on the oppositions

The characterization of direction focus has postulated a number of binary oppositions but has not specified whether they are best thought of as privative or equipollent. The quotes from DeLancey in §1.1 indicate a basic equipollent opposition between SAP→3 and 3→SAP configurations with somewhat secondary oppositions, or neutralization of oppositions, in the local realm. Along similar lines, Mallinson & Blake (1981) say that

> Cree and Algonquian languages generally have markers on the verb to distinguish direct combinations from inverse ones, a direct combination of A and O being one where A is higher than O, an inverse combination being one where A is lower than O.
>
> (Mallinson & Blake 1981: 66)

These authors are not as explicit as DeLancey but clearly imply that the opposition is equipollent, viz. between [high→low] and [low→high].

However, this is not the sole possibility. In Nichols' view, "the verb takes direct marking when subject outranks object on this hierarchy, and inverse marking otherwise" (1992: 66). Although the context makes it clear that she does not understand this literally but rather loosely, such a privative opposition between [high→low] and [otherwise], i.e. [low→high], [high→high] and [low→low], would not be trivial if one bears in mind that none of the world's known languages mirrors such semantics formally by having a marked direct and an unmarked inverse.

It would be reasonable to think that the characterization of direction depends on the particular languages one considers "prototypical". Since Nichols explicitly mentions Plains Cree in her definition (see the full quote in §3.2 of the preceding chapter), it is important to note that DeLancey also addresses this particular system:

> Direction systems in the Algonquian languages characteristically distinguish four direction categories: inverse, in which agent is lower than patient on a person hierarchy, direct, in which agent is higher than patient, and two so-called local categories […], 1st agent acting on 2nd patient, and 2nd [agent] acting on 1st patient. […] [W]e might also expect a direction marking Tibeto-Burman language to distinguish the local categories from the direct and inverse categories.
>
> (DeLancey 1981a: 86)

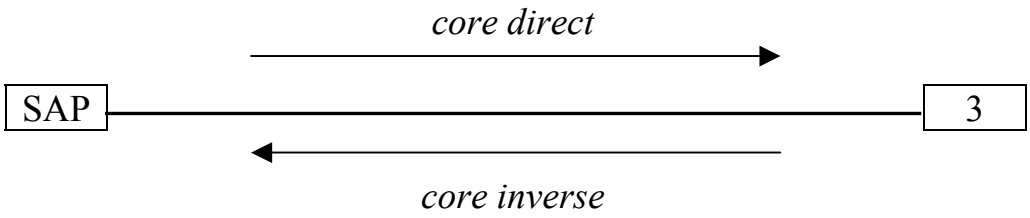
In other words, the so-called local categories are regarded as something different from the direct versus inverse opposition. As far as Plains Cree is concerned, this particular issue shall be discussed in more detail in the chapter devoted to Algonquian languages. But before answering the question of the nature of the oppositions, and due to the fact that this last quote from DeLancey explicitly raises the issue of the different scenarios, a look at the several personal domains with regard to direction is in due order here.

2.2 Direction domains

Mixed scenarios

At the core of the system is the interaction between those persons that are involved in the speech act and those that are not. In Figure II-7, only low-focal direction with these persons is shown. Some of the questions of typological interest are whether both the direct and the inverse are formally marked or only the latter, and what kind of allomorphy there can be (modal as in Algonquian, aspectual and modal as in Olutec, etc.). I have called this CORE DIRECTION.

Figure II-7
MIXED SCENARIOS

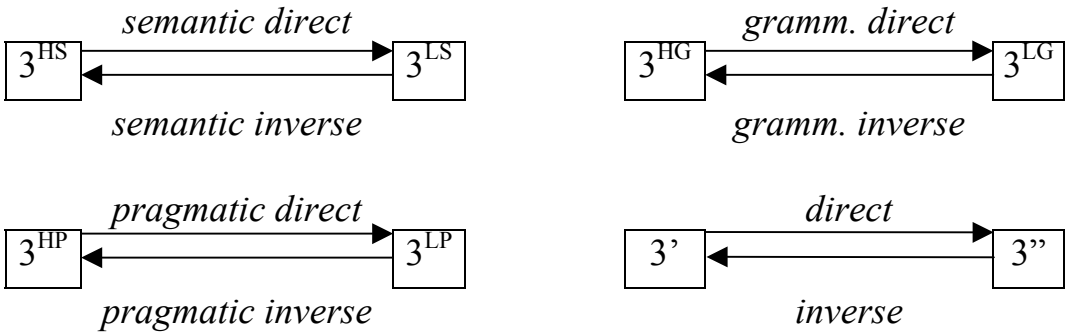


Non-local scenarios

When only 3rd persons are involved, there are a number of parameters according to which a distinction between them can be drawn. First, inherent semantics may play a role in that nominals higher in animacy outrank those lower in animacy on the indexability hierarchy—or some other semantic element of the ones mentioned in the previous chapter. Second, discourse factors may result in one entity being more salient or topical than the other, at least for some portion of a given text. Third, grammatical considerations can define one of the nominals (e.g. the possessor, the singular NP) as ranking higher than the other (e.g. the possessee, the plural NP). I shall use the symbols 3^{HS} and 3^{LS} for rankings based on inherent semantic properties of two 3rd persons on the one hand (3^{HS} being higher than 3^{LS}) and 3^{HP} and 3^{LP} for those

rankings based on pragmatic, or discourse, factors on the other (3^{HP} outranking 3^{LP}). Where needed, I shall use 3^{HG} and 3^{LG} with the grammatical ranking mentioned above. Whenever a language fails to distinguish between these rankings, or when the distinction is irrelevant, I shall use simply 3' and 3" as shorthand. Additionally, more than two 3rd persons may be distinguished, in which case the distinction between weak and strong non-local direction may be present. Figure II-8 summarizes these notions.

Figure II-8
NON-LOCAL SCENARIOS



Mixed and non-local scenarios

Some selected patterns of alignment between the mixed and the non-local scenarios are depicted in Table II-4 below:

Table II-4
NON-LOCAL AND MIXED DIRECTION-MARKING PATTERNS

	3'→3" $3^{HP}\rightarrow3^{LP}$ $3^{HS}\rightarrow3^{LS}$	SAP→3	3→SAP	3"→ 3' $3^{LS}\rightarrow3^{HS}$ $3^{LP}\rightarrow3^{HP}$
A core	—	α	β	—
B non-local	{ α }	—	—	{ β }
C global	{ α }	}	{ β }	}
D_1 semantic	— α	{ — }	β —	
D_2 pragmatic	α { — }		{ — }	β
E_1 core-semantic	— { α }		{ β }	—
E_2 core-pragmatic	α —	α	β —	β

Let us begin with the simplest patterns A, B, and C. A given language shows core direction if the marking patterns like A—the case where only DeLancey's

core distinction between SAP and 3rd persons is operative. A pattern like B is the mirror image of A in the sense that 3rd persons are ranked relative to each other but SAPs do not enter the direct versus inverse opposition, and I will call this NON-LOCAL DIRECTION because it appears in the non-local scenarios only. Pattern C treats configurations where higher arguments act on lower ones alike, irrespective of both whether there are SAPs involved or not and whether some arguments rank higher than others on referential, semantic or pragmatic grounds. I will refer to this last simple pattern as GLOBAL DIRECTION.

The patterns in D are subpatterns of non-local direction (B). D_1 makes a distinction between 3rd persons on semantic grounds while D_3 distinguishes 3' and 3" on pragmatic grounds, and so I will call them SEMANTIC and PRAGMATIC DIRECTION (redundantly implying NON-LOCAL), respectively. The E patterns are combinations of D patterns with A patterns, i.e. either semantic or pragmatic direction with core direction, and are simply labeled CORE-SEMANTIC and CORE-PRAGMATIC here. The terms "semantic inverse" and "pragmatic inverse" (Givón 1994) or "inverse alignment" and "inverse voice" (Gildea 1994) have been proposed for $A/D_1/E_1$ and D_2, respectively, but I have preferred —for expository rather than analytic purposes—not to lump together those direction patterns that are linked to a referential hierarchy (core direction) with those related to a semantic inherence hierarchy.

Local scenarios

Recall DeLancey's characterization of the Algonquian systems given above. Orthogonal to the opposition direct versus inverse, the local configurations 1→2 and 2→1 may show a dynamic of their own. Bloomfield (1946, 1958, 1962), Hockett (1966, 1993) and Goddard (1979a) postulate analyses of some Algonquian languages in this vein, but Dahlstrom (1986) and Wolfart (1996) describe Plains Cree as aligning the 2→1 scenarios with the direct forms and the 1→2 scenarios with the inverse ones. I shall take a close look at Algonquian in Chapter III, but since this discrepancy is not due to the fact that Plains Cree shows a different system from the languages the other scholars had worked on but rather to differences in the accounts, some space is devoted to the discussion of the local scenarios in this section.

In principle, five possibilities exist as to the treatment given to the SAPs when interacting with core direction. First, they are not ordered relative to each other and therefore the category of local direction does not apply. Second and third, they are ordered along the same dimension as the relative ranking SAP > 3, either as 1 > 2 > 3 or as 2 > 1 > 3. In these cases, local direction simply aligns with core direction in one way or another. Fourth and fifth, they are ordered along a different line from the ranking SAP > 3, either 1 >2 or 2 > 1, in which cases the analysis becomes more complicated.

Table II-5 below shows different alignment patterns when both local and mixed scenarios are taken into account. Pattern Ia is the rather trivial first possibility mentioned above, viz. there is core direction but the SAPs are unordered relative to each other. Pattern Ib is the more interesting case, where direction marking alone is not enough to decide whether we are facing possibilities two and three or rather four and five. The II-patterns are those where each local scenario aligns formally with either core direct or core inverse, and therefore represent possibilities two and three, respectively. Finally, the III patterns represent some of the cases of unrestricted direction mentioned in §2.1 above: X→SAP (IIIa) and SAP→X (IIIb).

Table II-5
LOCAL AND MIXED DIRECTION-MARKING PATTERNS

	SAP→3	1→2	2→1	3→SAP
Ia core	α	{ γ }		β
Ib core	α	γ	δ	β
IIa core-local	{ α }		{ β }	
IIb core-local	α	β	α	β
IIIa SAP undergoer	α	{	β	}
IIIb SAP actor	{	α	}	β

Heath (1991, 1998) showed that the morphological marking of local scenarios in languages of northern Australia and the Americas could become a serious descriptive challenge if one is obsessed with accounts of the type "one form, one meaning". He argued that, in addition to paradigmatic and syntagmatic interactions (one of Silverstein's main points in his seminal paper of 1976), pragmatic effects must be taken into account as well if the goal is to understand how some complex pronominal systems work. In particular, "the correct cross-linguistic generalization is a negative one, namely, that transparent 1↔2 combinations are avoided" (Heath 1998: 84). More precisely,

> there are conflicting factors involved in the hierarchical and marking relationship between first and second persons, [… and] [r]ather than emphasizing the technical problems of establishing and maintaining the communications channel, I would stress the pragmatic delicacy and dangerousness of using first and second person pronouns (particularly singulars), and the particular delicacy of combining them in a noun phrase or sentence in a manner overtly specifying their relationship to each other.
>
> (Heath 1991: 78)

It goes without saying that this is relevant both for the study of local direction in particular and for the analysis of core argument marking in general. Since I shall turn back to Heath's point about the marking of 1s↔2s interactions when the individual languages are considered in this study, suffice it to say here that I distinguish between these interactions (the M[inimal] L[ocal] S[cenarios]) and all those 1↔2 configurations where the total number of arguments is more than two (the E[xtended] L[ocal] S[cenarios]).

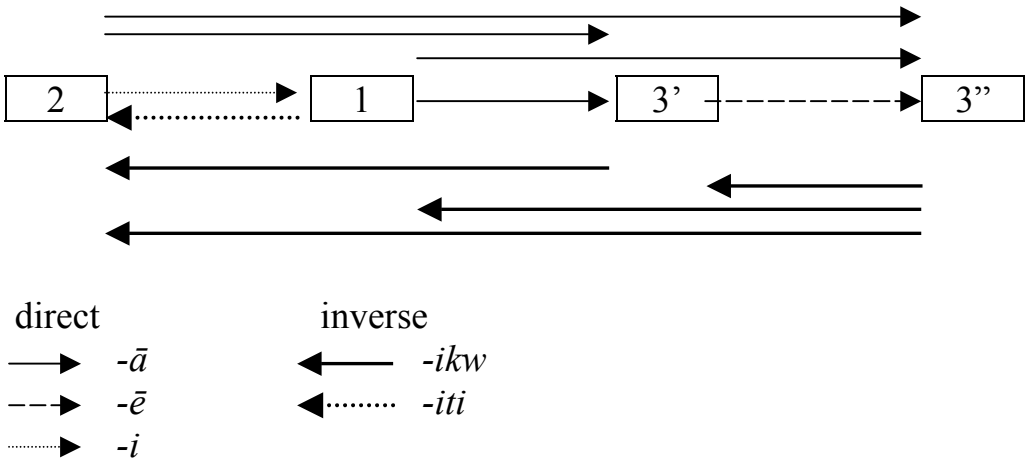
All scenarios combined

Although there are many logical possibilities when all three scenarios are considered together, many of them just do not seem to exist. To my knowledge, there is no natural language that becomes involved in the direction-marking business by opposing a marking strategy α that covers SAP→3 and 3"→3' configurations and a marking β that subsumes the 3→SAP and 3'→3" interactions. By the same token, when all three scenarios are taken into account, several possibilities have to be, at least temporarily, ruled out because of lack of data that support them. To show that some purportedly inexistent patterns do appear in a language is not the goal of the present work and must be a topic reserved for later study. Rather, a number of the well-known and some of the lesser known languages alleged to display direction marking are to be analyzed on the basis of these and other parameters to be discussed further down.

A word on marking, and a first look at Plains Cree

So far I have said little about marking, implying that either a morpheme opposition or the choice between, say, an active and a passive construction constitutes the marking in question. However, there may be more than one marker playing a role, e.g. verbal and nominal marking, or several verbal slots participating in person and action marking. In fact, the standard argument for Plains Cree runs more or less like this: Given that a prefix position ranks, roughly, 2nd persons higher than 1st persons (i.e., 2nd persons are always marked when involved, 1st only when there are no 2nd persons involved, and 3rd persons only if there are no SAP arguments), the morpheme encoding 2→1 is an allomorph of the direct morpheme and the suffix marking 1→2 is an allomorph of the inverse one. Therefore, although we are confronted with a pattern like Ib in Table II-5, we can assimilate it to IIb, thus arriving at the textbook account of Plains Cree, a slightly simplified version of which is given in Figure II-9 below.

Figure II-9
SIMPLIFIED ANALYSIS OF PLAINS CREE



The direct has the allomorphs *-ā* for weak and strong core direction (SAP→3), *-ē* for non-local direction, and *-i* for local direction. The inverse is always *-ikw* except in the local scenario, where *-iti* appears instead. However, observe that the morphological evidence that allows one to place the 2nd person above the 1st comes from the prefix position, and that another suffix position ranks persons differently, viz. 1p > 2p > 3 > sSAP. This poses at least two important questions to be addressed in Chapter III: (i) Is the direction marking slot best regarded as sensitive to the same hierarchy as the prefix position or to the ordering that governs the other suffix slot—or, for that matter, to a third hierarchy—, and (ii) apart from morphology, is there any syntactic evidence that either analysis is to be preferred?

Nature of the oppositions

Let me now return to the issue of a privative characterization of the opposition direct versus inverse. To be sure, such a definition does not amount to saying that only pattern IIIa in Table II-5 (i.e., where SAP→3 is marked differently from all other cases: 3→SAP, 1→2 and 2→1) corresponds to the opposition direct versus inverse. It amounts to more than that because non-local scenarios are also taken into account, but also to less than that since pattern IIIa would show formal marking that strictly mirrors semantics, something neither stated nor implied in the definition. The question is, however, not whether a particular language shows one kind of pattern or the other—as we shall see, many different and quite intricate kinds of pattern actually exist. Rather, what is essential is the usefulness of a privative DEFINITION of direction instead of regarding features like privative and equipollent as PARAMETERS along which the phenomenon may vary.

Both Silverstein's (1976) pioneering article and Heath's (1976a) addendum suggested what most posterior research either explicitly or implicitly assumed, viz. that there is not a cross-linguistically valid universal relative ordering of the SAPs. In fact, these studies also showed that the grammatical category of number, to which not much attention has been given here so far, plays an important role in the characterization of some indexability hierarchies.[9] Since a number of the languages discussed in the subsequent chapters will provide uncontroversial evidence supporting this claim, I will leave the question of privative versus equipollent opposition open at this point and let the individual languages decide.

3. Formal aspects of direction

This section proposes some formal parameters along which direction marking may vary either within a given language or cross-linguistically. These parameters are summarized in (24):

(24) FORMAL ASPECTS OF DIRECTION

a. Locus of marking: detached, dependent, head, double
b. Relationship to alignment

3.1 Locus of marking

This parameter basically builds on the proposal advanced in Nichols (1986a, 1992) and Bickel & Nichols (forthcoming) by distinguishing the marking of the relationship between a dependent and its head according to whether it is (i) a phrasal clitic (detached), (ii) an affix, clitic or function word forming some kind of unit with the dependent (dependent), (iii) an affix, clitic, or function word forming some kind of unit with the head (head), or (iv) material on both dependent and head (double). In the case of direction, the head is the predicate, usually a verb, and the dependents are the arguments, usually (pro)nominal elements. Note that I do not address the question whether I am dealing with pronominal-argument languages or not in order to decide whether the external nominals are arguments or adjuncts. I simply look at whatever nominal marking that bears relation to direction irrespective of syntactic status.

[9] Algonquian (Chapter III) and Kiowa (Chapter VI) are cases in point. For data and analysis of different languages in Asia where number plays a role, consult Ebert (1987, 1991, 1993). Ebert (1998) addressed the interesting marking patterns of SAP undergoers in Himalayan languages.

By considering only these values for this parameter I am excluding from the analysis at least two interesting possibilities. First, it might be the case that direction is not segmentally marked because word order does the job. As a matter of fact, this latter option is a major parameter in Givón's view (1994, 1995, 2001), which distinguishes between "morphological" and "word order" inverses. Second, part of the functional yield of an affix may be carried by its templatic position rather than exclusively by its segmental make-up. For instance, a given morpheme X may have to be labeled 'direct' when suffixed but 'inverse' when prefixed. Readers interested in this opposition between "eidemic" and "morphemic" structure in the context of direction are referred to Bickel (1994) for a theoretical discussion and application to some Asian languages, but also to Plains Cree.

3.2 Relationship to alignment

As explained in Section 1 above, passives and inverses are not necessarily mutually exclusive if the direction opposition is placed outside the domain of voice. The former is conceived as dynamic actional deixis, whereas (at least some) voice categories include Klaiman's "basic" and "derived" oppositions, i.e., essentially the realm of valence-changing operations. Since there is in principle no reason that precludes these two grammatical categories from cooccurring in a given clause, the relevant question is: (i) Are they marked separately or (ii) can there be portmanteau morphemes or constructions expressing both of them?

The importance of this goes beyond combinability patterns of voice and direction, however. When studying a given language, (i) are we dealing with "standard" grammatical relations underlying most of its morphology and syntax with some direction marking-device superimposed, or (ii) does direction interact with grammatical relations, upon which the voice system is based, in a more fundamental way? For example, different morphosyntactic processes may reflect different or no pivots in such a way that both ascertaining whether there are grammatical relations at all and determining their exact nature become a major challenge—in which case the issue is upon what exactly the direction system is superimposed. [10]

[10] For recent examples of formalist work on the relation between direction (more precisely, an indexability hierarchy) and grammatical relations, the reader is referred to Blain (1999) and especially to Nichols (2001). While the former study is rather traditional and addresses the specific question of inverse versus passive in Plains Cree, the latter proposes that the relevant relation is between an indexability hierarchy and, rather than grammatical relations proper, the Tense node and takes a look at Kashmiri and Picurís. For optimality-theoretic accounts, see the references given in Appendix 3.

Grammatical relations

When I sketched different clause alignment patterns in Chapter I, I did not mention a possibility that is claimed to actually occur in some of the languages addressed in this study: the "remapping" construction of Table II-2 (briefly mentioned in §1.4 above). This further system distinguishes two types of transitive predication and groups the S of intransitive clauses together with both the A of direct ones and the O of inverse ones. This is schematically depicted in Figure II-10, where the arguments that are treated alike by the morphosyntax appear in the shaded areas:

Figure II-10
A FURTHER CLAUSE ALIGNMENT PATTERN

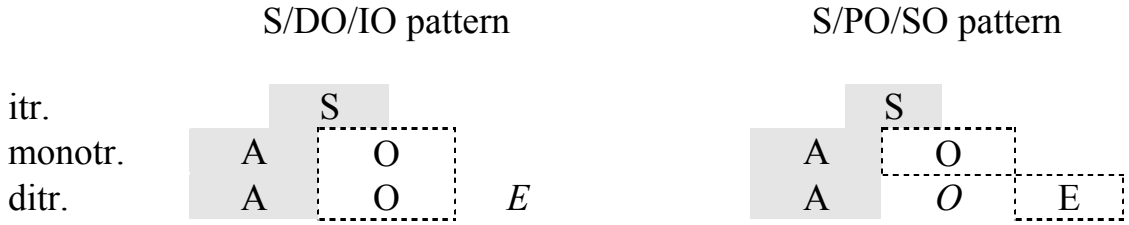
Intransitive	S	
Transitive$_1$	A	O
Transitive$_2$	A	O

In a sense, such a pattern could be considered merely one more split. It differs from the other common split systems in that it is not TAM or syntactic clause status that decides whether S groups together with A or O, but the referential, semantic and/or pragmatic properties of the arguments. In other words, it is an instance of hierarchical alignment; the access to syntactic functions is governed by an indexability hierarchy.

As we shall see in the course of the present study, such a system is interesting because it does not appear to be a mere whim of the morphology; the arguments underlined in Figure II-10 above are treated preferentially, so to speak, with regard to both coding and behavioral properties. This means that a language showing such a pattern does not have direction marking only as a morphological feature or as a correlate with voice; morphological direction marking correlates with a syntactic organization principle. Let me briefly compare such a hierarchical pattern with some non-hierarchical ones.

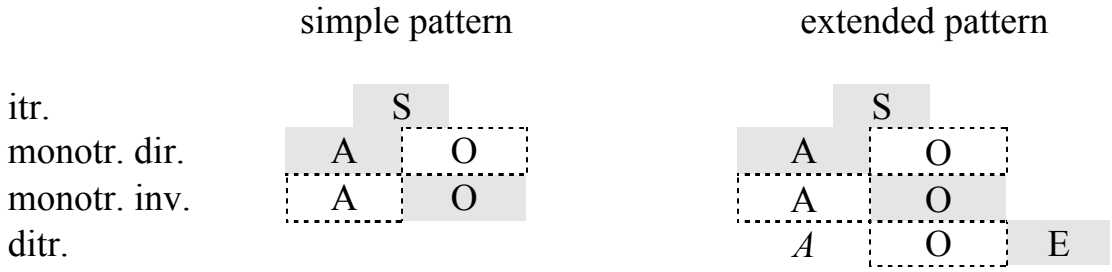
Figure II-11 below depicts two familiar accusative patterns where no sensitivity to an indexability hierarchy is present. The one on the left treats undergoers of monotransitive predicates and those of ditransitive predicates alike; therefore, the syntactic functions are subject (S/A), direct object (O), and indirect object (E). The pattern on the right, on the contrary, treats the extended argument of a ditransitive predicate (goal, beneficiary, etc.) like the undergoer of a monotransitive predicate; therefore, the syntactic functions are subject (S/A), primary object (O_{monotr}/E), and secondary object (O_{ditr}).

Figure II-11
TWO ACCUSATIVE PATTERNS



By contrast, Figure II-12 shows two hierarchical patterns. The one on the left corresponds to what was introduced in Figure II-10, i.e., the situation where the primary argument is the actor in "transitive$_1$" direct clauses but the undergoer in "transitive$_2$" inverse clauses. In this particular pattern, the secondary argument groups undergoers in direct clauses and actors in inverse clauses together, but it goes without saying that this is not the only possible option. The pattern on the right further introduces ditransitive predicates, and thereby extended arguments, into the picture. Here, the primary argument of ditransitive clauses is the extended argument, and both actor and undergoer are given less prominent a place in the morphosyntax. These simplified patterns are only two of many possibilities that can be found in actual languages, and I shall return to them when discussing Kiowa in Chapter VI.

Figure II-12
TWO HIERARCHICAL PATTERNS



Grammatical relations, clause type, and terminology

Two terminological remarks are in due order at this point. First, scholars working on languages that allegedly belong to the inverse type have recognized the affinity between inverse clauses in general and the (admittedly Anglo-centric) prototypical passive, which is one of the reasons for the passive analysis given to inverse constructions in the past. Nevertheless, the similarities

between the constructions should not lead us to use the terms "subject" and "object" without further qualification in this context. Rhodes (1976, 1994) and Arnold (1994, 1997) use these traditional labels with the proviso that macroroles and grammatical relations are conversely mapped onto each other with inverse constructions: the A is the object, the O is the subject (see Chapters III and VII). Salas (1992), who basically addresses coding properties and their cognitive implications, uses the terms "focal person" and "satellite person" for the primary and secondary arguments in Mapudungun and thereby avoids the received labels (see Chapter VII). Grimes (1985) propounds for the same language a terminology that is even more problematic: "topical person" and "nontopical person".

As to "focal / satellite person", I believe the metaphors to be suggestive, but the problem is that the notions of focus and focality are normally used for quite different things in descriptive and theoretical studies. The same applies to "topical / nontopical person". The terms "subject" and "object" are likely to be the most problematic of all because of the many different uses (and especially the myriad of associations) they have, the long and yet unresolved controversy regarding their usefulness and universal applicability, and the rather trivial but devastating effect of technical expressions that cover so many different, sometimes even contradictory, concepts; they end up meaning less than what they meant as non-technical terms. As mentioned in Chapter I, the labels morphological and syntactic primary argument, secondary argument, etc. are to be preferred for cross-linguistic comparison, but I shall use the traditional terms when discussing the individual languages in order not to render the reading unnecessarily difficult. The reader should bear in mind that they refer to language-specific notions.

The second terminological issue is what to call the two types of transitive clause organization that differ as to which macroroles are assigned primary and secondary argument status. I provisionally used the terms "active" and "remapping" in Table II-2 while in Figure II-10 I employed the more neutral labels "transitive$_1$" and "transitive$_2$". At a different level, they correspond to Manning's analysis discussed in Chapter 1, §2.1 (the "inverse grammatical relations"), and therefore one could argue in favor of calling them "direct" and "inverse" constructions, respectively. To my mind, however, the label "inversion" is already dangerously polysemous (to be sure, "inverse" less so) since it not only refers to the kind of phenomena that occupy us in the present study but also to the analysis given in RG to constructions where NPs marked like indirect objects exhibit subject properties (e.g., Italian *a Giorgio piace Firenze* 'George likes Florence'), and even to systematic alternations in word order patterns—some of them related to indexability hierarchies, like the well-known Navajo constraints on core argument NPs, and others related to

illocutionary force, like the order of English subjects and auxiliaries.

For that reason, I follow Rhodes (p.c.) in using MORPHOLOGICAL INVERSE to refer to a clause form that marks inverse meaning by morphology alone and SYNTACTIC INVERSE to cover cases where the clause structures of direct and inverse clauses differ. A special instance of syntactically marked inverse clause is a transitive construction where the undergoer is the primary argument ("subject") and the actor is the secondary argument ("object"), which I will call REMAPPING here. Even though there are more possibilities than just the three shown in (25), these are the most important ways discussed in Chapters III through VII to encode the direction opposition in morphology and syntax. I shall return to this typology in greater detail in Chapter VIII.

(25) MORPHOSYNTACTIC EXPRESSIONS OF THE DIRECTION OPPOSITION

a. Morphological inverse: active structure covers both direct and inverse.

b. Syntactic inverse:
   b_1) passive inverse: active clauses are direct, passives are inverse
   b_2) remapping inverse: active clauses are direct, remapping ones are inverse

3.3 Alignment, voice, and direction

Let me close this chapter by proposing a relationship between these three areas of morphosyntactic structure in terms that are specific enough to allow a reasonable degree of analytical precision but vague enough to accommodate different theoretical backgrounds and possibilities of application. Rather than a finished and monolithic model, the following is an ordered toolbox.

ALIGNMENT is the result of mapping macroroles onto grammatical relations (examples of these two fundamental dimensions are schematically represented in Figures II-13 and II-14 below). The former are ideally seen as refined versions of S, A, and O and the relational hierarchy mentioned in Chapter I, most probably distinguishing more than merely intransitive and transitive clauses in their simple and extended variants. The latter may be conceived as consisting of different layers, some of them possibly more semantically driven than others, therefore explicitly allowing for mixed pivots. A simple SAO model like Dixon & Aikhenvald's and a two-layer syntactic structure like Manning's might not be too impractical an approximation—again, as a heuristic device rather than a universal theory of anything.

VOICE can be thought of in traditional terms: different voices represent forms of the predicate (e.g. the active), indicating whether a given grammatical relation (e.g. the subject) is mapped onto a particular macrorole (e.g. the actor).

Alternatively, it can be regarded as a system of transformations that typically affect both mapping and valence (in this model, represented by the different predicate argument structure on the macrorole tier).

Figure II-13
ROLE TIER

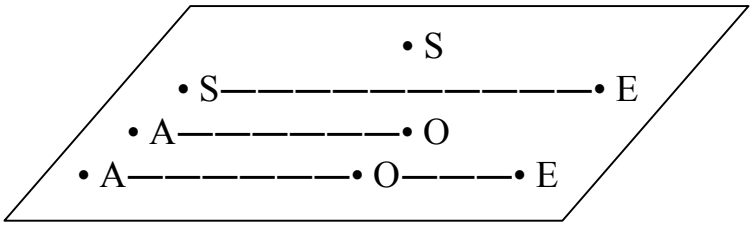


Figure II-14
GRAMMATICAL RELATIONS TIER

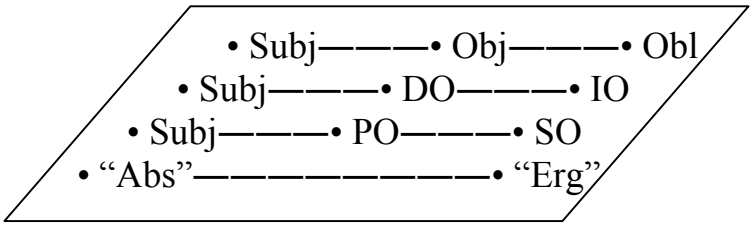
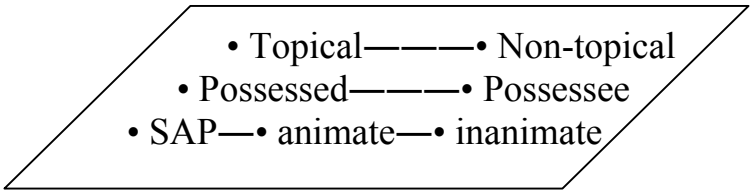
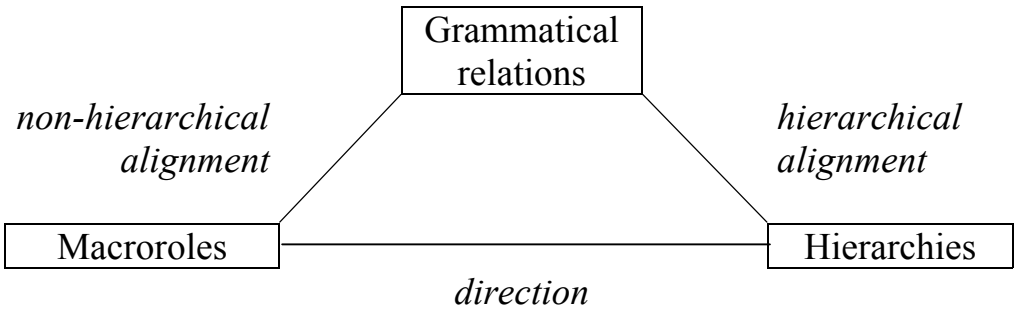


Figure II-15
HIERARCHY TIER



If indexability hierarchies come into play, new possibilities arise (an example of a multi-layered hierarchy tier is given in Figure II-15 above). First, the hierarchies may constrain the mapping between the macrorole and the grammatical relations tiers, in which case we call the phenomenon HIERARCHICAL ALIGNMENT. Second, the mapping between the hierarchies and the macroroles might have a morphological reflex, and this is what I call DIRECTION here. The interactions are summarized in Figure II-16 below:

Figure II-16
THREE-TIERED MORPHOSYNTACTIC STRUCTURE



The plain inverse depicted schematically in Figure II-1 consists of a simple relationship between macroroles and hierarchies: when a role hierarchy like A > O and an indexability hierarchy like SAP > 3 are aligned, a direct form is used, and an inverse form is in order if the contrary is the case. More interesting situations arise, as mentioned at the end of §3.3, when the direction opposition determines e.g. whether an active or a passive clause is used. A particularly notable case of hierarchical alignment consists in the remapping between macroroles and GRs or, in other words, the strict assignment of a high syntactic function based rather on an indexability hierarchy than on a relational hierarchy.

Summary

The present study proposes to explore the complex phenomenon of direction distinguishing a functional from a formal realm. The former consists of:

- direction focality (low-focal, stating merely the direction in which the action proceeds; particular or high-focal, stating in more detail the specific persons involved, and unrestricted or non-focal, stating merely the person from which or towards which the action proceeds) and
- direction realms (local domain, comprising SAPs only; non-local domain, where only 3rd persons are involved, and mixed domain, where both SAPs and 3rd persons interact).

The formal aspects of direction can be thought of as comprising:

- locus of marking (detached, head, dependent, or double-marking) and
- relationship to syntactic alignment (whether direction is superimposed on a non-hierarchical pattern or whether it correlates with hierarchical alignment).

The expression of the category of direction can be either purely morphological, in which case I shall speak of morphological direct and inverse clauses, or syntactic. In the latter case, I shall distinguish at least two subtypes: (i) the passive inverse, where direct clauses are active and inverse ones are passive, and (ii) the remapping inverse, where both direct and inverse are active and transitive but the former maps A's to primary arguments ("subjects") and O's to secondary arguments ("objects") and the latter maps A's to secondary arguments and O's to primary arguments.

Morphosyntactic structure can be conceived as based upon three tiers: macroroles (mirroring more or less directly idealized semantic structure), grammatical relations (targeting different arguments and/or combinations thereof), and indexability hierarchies. Each of these tiers may be in turn multi-layered, allowing for several predicate types, mixed pivots, and different hierarchies. Different mappings from the macrorole tier onto grammatical relations result in distinct non-hierarchical alignment types, while voice transformations alter some of these mappings and predicate valence. The hierarchy tier may constrain the former mapping (hierarchical alignment) and/or be mapped onto macroroles, in the latter case yielding different direction patterns. No claim is made here as to the most adequate way of representing these three tiers in a theory of grammar. Different frameworks may accommodate them differently.

Chapter III
Algonquian languages*

> [Cree] paradigms are formidable. […] For the learner they represent a considerable load of sheer memorization. For the linguist they fail to show clearly any recurrent regularities of structure. […] The Cree endings cannot be neatly dissected into morphemes. […] Certainly no simplification can be achieved. […] The paradigms as they stand are unanalyzable.
> — H. A. Gleason, *Introduction to descriptive linguistics*

Present-day linguists may still hold Athabascan and perhaps Caucasian in awe, but rarely anyone expresses dismay at Algonquian. Since Sapir's work everyone knows that Wiyot and Yurok have something of a relationship with the Algonquian family, substantial portions of the proto-language have been more or less plausibly reconstructed, and the paradigms are admittedly complex but positively understood nowadays—or are they? Algonquianists are less frivolous than this when it comes to the comparison of obviation, and especially direction, as found in the different tongues. Moreover, comparatively little attention has been given to syntactic arguments aimed at dealing with syntactic phenomena, the bulk of the work paying implicit homage not to Gleason's verdict (An ending like *-ikowāwak* in *kiwāpamikowāwak* 'they see you$_p$' can't be just a portmanteau, can it?) but to his amazement at what seemed, and is, a very elaborate morphology.[1]

The present chapter does not claim to have all the answers to the questions raised, but I hope to show that Algonquian languages are more intriguing than they might appear after superficial encounters in textbooks. Three languages are discussed from the perspective of their morphology and the relationship of predicate and arguments within clauses. No account of direction and/or

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* Readers interested in more information on Algonquian languages should consult Campbell (1997: 152f) and Mithun (1999: 327f).

[1] Already Pittman (1965: 34) had quoted almost identical lines from the 1955 edition of Gleason's textbook. Although the second edition of 1961 is a revised one, Gleason's opinion on the Cree paradigms (pp. 117f) was among the things that did not change during the revision.

Algonquian could conceivably afford to exclude Plains Cree, the guiding light to which all gazes turn when the cross-linguistic discussion becomes either too technical or too sloppy. If you are not familiar with what Robert Logan called "the language of the precise speakers", I hope you marvel at the beauty that underlies and transcends its intricacies. If *nēhiyawēwin* is not new to you, you might want to reconsider some details that are commonly dealt with in two or three lines in the literature, like the "well-known Algonquian person hierarchy". Miami-Illinois, the second language addressed here, can be considered both less formidable and slightly more progressive because a few portions of the morphology have been simplified, but it retains an older direction marking in dependent verb forms. I have included Central Ojibwa as the third language because one of its descriptions is in terms that diverge from those utilized for Plains Cree and Miami-Illinois in such a way that a comparison must not be omitted—in particular, Rhodes's (1976) syntactic rather than purely morphological account of its verb morphology shall be presented. Finally, I deal with some paradigms not discussed in the individual sections and explore some fundamental issues raised by the relationship of predicates and arguments across clause boundaries as well as the tricky question of grammatical relations.

1. Plains Cree

The Central Algonquian language called Cree is basically agglutinative, with some fusional traits in the verb paradigms that shall concern us in the course of this section. Modern Cree is spoken by approximately 60,000 people from the west coast of James Bay to the foot of the Rocky Mountains, and its four major dialects are, from east to west, Moose Cree, Swampy Cree, Woods Cree, and Plains Cree. The latter is spoken in central Alberta and Saskatchewan, counts some 25,000 speakers, and is the variety discussed here.

1.1 Essentials of Plains Cree

The comparatively simple nominal inflectional morphology can be described with the categories of possession, number, gender, and obviation. Possessed nominals take personal affixes encoding their possessors (the same affixes that occur on certain verb forms). Singular number is unmarked, and plural interacts with gender and obviation. Gender distinguishes animate from inanimate nominals and is a fundamental (covert) distinction that also pervades the verb paradigm.[2] Most nouns denoting human beings, animals, spirits, and trees are

[2] Algonquian grammar does not distinguish between masculine and feminine like English. In

animate, e.g. *kisēyiniw* ‘old man’, *wacask* ‘muskrat’, *manitōw* ‘spirit’ and *sihta* ‘spruce’.[3] Obviation, which shall play a central role in the discussion of direction, consists of the opposition of two kinds of 3rd persons, viz. a formally unmarked proximate and a marked obviative. The former is the more “central” 3rd person in a clause due to semantic (animate rather than inanimate), syntactic (possessor rather than possessed), or pragmatic reasons (topical rather than nontopical). Roughly, whenever a Cree clause includes more than one 3rd person, only one of them is proximate and the others are obviative. Eligible NPs may change their obviation status from one discourse section to another, as we shall see in the course of this chapter.

Thus, nouns take the following suffixes:[4]

(1) PLAINS CREE NOMINAL INFLECTION I

	animate		inanimate
	proximate	obviative	
singular	—	*-a*	—
plural	*-ak*	*-a*	*-a*

The following examples illustrate this morphology in actual sentences.[5] In (a), the animate noun *kosis* ‘son’ appears in the obviative because it is possessed by a 3rd person. In (b), the inanimate *maskisin* ‘shoe’ appears in the plural. Finally, animate *ospwākan* ‘pipe’ appears in the proximate plural in (c).

(2) PLAINS CREE NOMINAL INFLECTION II (Dahlstrom 1986:34,43, Wolfart 1981:55)

a. Niwāpamimāwa o-kosis-**a**.
I.see.him/her:SDIR 3POSS-son-OBV
‘I see his son.’

b. Mihkwāwa maskisin-**a**.
they.are.red shoe-pINAN
‘The shoes are red.’

c. Ospwākan-**ak** mihcētiwak.
pipe-pANIM they.were.numerous
‘There were many pipes.’

---

this study, normally only masculine forms (*he*, *him*, and *his*) are given for the sake of simplicity, but it should be borne in mind that, in the majority of the cases, English feminine forms (*she* and *her*) are intended as possible translations as well.

[3] For extensions and additional animate noun groups cf. Wolfart (1996: 398f).

[4] Many affixes have a different form depending on whether they follow a glide/consonant or a vowel; the allomorphy of the nominal suffixes is such a case (*-wa* or *-wak* occurring after vowels and *-a* or *-ak* elsewhere; cf. Wolfart 1981: 33 for more details). In the case of verb affixes, the segments given in parentheses in the lists correspond to glides/consonants inserted between vowels.

[5] Examples with detailed glosses will show rough underlying forms of the morphemes rather than the actual surface forms.

Plains Cree has no grammatical case, i.e. no dependent marking showing the syntactic/semantic relationship between the NPs and the predicate of a clause in terms of nominative, accusative, ergative, or the like.[6] The gender distinction is inherent to the noun semantics, number and obviation are independent of the particular predication frame in which the NP appears, and possession establishes a relationship between two referential entities regardless of predication.[7]

Verb stems come in four shapes, depending on both argument gender and transitivity. Intransitives can have an animate or an inanimate argument, and are labeled accordingly to reflect this fact: A[nimate] I[ntransitive] (e.g. *api*- 'sit') and I[nanimate] I[ntransitive] (e.g. *misā*- 'be big'). Transitives can have an animate or inanimate undergoer, being either T[ransitive] A[nimate] (e.g. *wāpam*- 'see (somebody)') or T[ransitive] I[nanimate] (e.g. *wāpaht*- 'see (something)'). In addition, verbs appear in a number of so-called orders and modes, of which we shall deal only with two of the major ones here. Roughly, the independent order is used in main clauses and the conjunct order occurs in subordinate clauses; prefixed and suffixed material distinguishes them morphologically, as will be seen soon. Paradigms for all the verb forms discussed here, as well as some important morphophonemic rules that explain some of the surface forms actually found in texts, are given in Appendix 1.

1.2 The Plains Cree verb

The Plains Cree verb can be modeled as consisting of one prefix position, a stem, and eight suffix positions.[8] These are discussed in what follows, but suffix positions 4, 6 and 8 will be neglected because they correspond to TAM categories that do not interact with those that are our main concern. Henceforth, suffix slots will be numbered in order to facilitate reference, but observe that Algonquianists usually place the index before the corresponding affix, e.g. $_2$-*ā*, instead of the practice followed throughout this study, -*ā*$_2$.

[6] Other case suffixes like locative, allative, etc. exist but are immaterial to our discussion.

[7] At a different level of abstraction, obviation marking can be conceived as depicting the syntactic/semantic relationship between the predicate and its arguments in a way comparable to traditional case marking (Balthasar Bickel, p.c.). Interesting though this issue is, it shall not be pursued further here.

[8] There has been some controversy as to whether these formants are clitics rather than prefixes (Anderson 1992, 2001). While I follow Anderson (2001) in considering this issue irrelevant for the present discussion, I rather follow common Algonquianist practice in treating the formants as prefixes instead of proclitics.

Table III-1
PLAINS CREE VERBAL TEMPLATE

-1	0	1	2	3	4	5	6	7	8
prefix	stem	strong direct	theme	obviative	(TAM)	person, number	(TAM)	number, obviation	(TAM)

adapted from Dahlstrom (1986: 25f) and Bickel (1994: 85f)

Prefix (person)

The prefix can either mark person or consist of a conjunct marker:

(3) PLAINS CREE PREFIX I (Bickel 1994:85f, Dahlstrom 1986)

(i) Person markers (independent):[9]

a. *ki-* whenever a [+addressee] person is argument
b. *ni-* whenever a [+speaker] person is argument and there is no [+addressee] person argument
c. Ø- whenever there is no SAP argument

(ii) Conjunct markers (conjunct):
ē-, *kā-*, *kī-*, …

Plains Cree persons are defined along the features [±speaker] and [±addressee] as shown in Table III-2:

Table III-2
PLAINS CREE PERSON FEATURES

	[+speaker]	[-speaker]
[+addressee]	12	2(s/p)
[-addressee]	1(s/p)	3(s/p)

Some of these combinations are the familiar ones of European languages: [-sp,+ad] corresponds to the 2nd person, either singular or plural ('you'), and [-sp,-ad] is the 3rd person, either singular or plural ('he/she/it', 'they'). In addition, [+sp,-ad] corresponds to the 1st person in the singular ('I') and to the

[9] The 3rd person possessor prefix *o-* found on nouns may also appear on the verb in the preterit as allomorph of the 3rd person marking Ø-. Continuing with a Proto-Algonquian allomorphy rule, the prefixes appear as *kit-*, *nit-* and Ø/*ot-* before vowels.

1st person plural exclusive when in the plural ('we, not you'). Notably, there is a category that is logically nonsingular because it includes both the speaker and the addressee, usually abbreviated "12" in Algonquian studies. Whenever the addressee is present, the prefix is *ki-*. If the addressee is absent, there either is a 1st person present (*ni-*) or not (*Ø*/*o-*). I shall use the following glosses for person-number combinations in what follows: 1s, 1p, 12, 2s, 2p, 3s, and 3p.

The well-known Algonquian hierarchy enters the picture here, viz. 2 > 1 > 3. Note that, if we look at isolated clauses, the access to this slot is apparently determined neither by topicality nor by grammatical relation, nor is semantic role decisive. Instead, a person including the addressee outranks a person not including it but including the speaker, which in turns outranks a person including none of them. This can be observed in the following examples:

(4) PLAINS CREE PREFIX II (Dahlstrom 1986:28f,16)

a. **Ki**-pēhtaw-iti$_2$-n$_5$. vs. **Ki**-pēhtaw-i$_2$-n$_5$.
2-hear-1→2-sSAP 2-hear-2→1-sSAP
'I hear you$_s$.' 'You$_s$ hear me.'

b. **Ki**-pimipahtā-n$_5$. vs. **Ni**-pimipahtā-n$_5$.
2-run-sSAP 1-run-sSAP
'You$_s$ run.' 'I run.'

c. **Ni**-pakamahw-ikw$_2$-w$_5$. vs. **Ni**-wāpaht-ē$_2$-n$_5$.
1-hit-INV-3 1-see-TR-sSAP
'He hits me.' 'I see it.'

d. **Ø**-mihkosi-w$_5$-ak$_7$ asiniy-ak.
3-be.red-3-3pANIM rock-pANIM
'The rocks are red.'

Suffix 1 (strong inverse)

The only morpheme occurring in this slot (called "obviative" by Dahlstrom 1986: 44) is in complementary distribution with -(*i)yi* in the third slot:

(5) PLAINS CREE SUFFIX 1 (Bickel 1994:85f, Dahlstrom 1986)

Strong direct:
-*im* SAP→3obv, 3prox→3f.obv

Nevertheless, I follow Bickel (1994: 88) in labeling it STRONG DIRECT instead of obviative, because -*im* does not appear in the 3prox→3obv configuration, and it does not occur with obviative arguments in the AI, II, or TI paradigms. Instead, this suffix appears in direct TA forms every time the two arguments involved

are non-adjacent on the hierarchy SAP > 3prox > 3obv > 3f.obv, where F.OBV stands for "further obviative".

(6) PLAINS CREE SUFFIX 1 II (Dahlstrom 1986:43/55)

a. Ni-wāpam-**im**$_1$-ā$_2$-w$_5$-a$_7$ o-kosis-a.
1-see-SDIR-DIR-3-OBV 3POSS-son-OBV
'I see his$_{prox}$ son$_{obv}$.'

b. Wāpam-**im**$_1$-ē$_2$-w$_5$ o-kosis-iyi-wa.
see-SDIR-DIR-3 3POSS-son-OBV-OBV
'He$^i_{prox}$ sees his$^j_{obv}$ son$^k_{f.obv}$.'

Suffix 2 (theme)

This slot is not only one of the most complex ones but also the most important position for our present purposes. Traditionally labeled "theme" by Algonquianists, it expresses different things in the TI and TA paradigms. In the former, the slot is occupied by *-ā* and *-Ø* in verbs of lexical classes II and III, respectively, and by *-am* or *-ē* in class I verbs (*-ē* occurring in the independent with SAP actors and *-am* elsewhere). In the TA forms, a number of different morphemes appear with different argument configurations and showing some differences between the independent and the conjunct order, as detailed in (7).

(7) PLAINS CREE SUFFIX 2 (Bickel 1994:85, Dahlstrom 1986)

Theme:

	Independent	Conjunct
TA		
a. *-ā*	SAP→3	pSAP→3, 3prox→3obv
b. *-ē*	3prox→3obv	—
c. *-ikw~iko*	3→SAP, 3obv→3prox	3→pSAP; 3obv→3prox
d. *-i*	2→1	2→1
e. *-iti*	1→2	—
f. *-it*	—	1→2
g. *-Ø*	—	sSAP→3; 3→sSAP
TI		
h. *-ē*	SAP→3	—
i. *-am/ā/Ø*	3→3	SAP→3, 3→3

As to TI forms, suffice it to say that the theme suffixes are transitivity markers restricted to inanimate stems. They encode neither actor nor undergoer roles but simply help distinguish TI forms from those of the AI paradigm (see Bickel 1994: 90f for discussion):

(8) PLAINS CREE TI AND AI FORMS

a. Ni-wāpaht-**ē**$_2$-n$_5$.
1-see-TR-sSAP
'I see it.' (TI)

b. Nit-api-n$_5$.
1-sit-sSAP
'I sit.' (AI)

Algonquianists traditionally call *-ā* and *-ē* in TA forms allomorphs of a DIRECT morpheme and *-ikw~iko* allomorphs of an INVERSE one. Independent forms distinguish thereby the mixed (*-ā*) from the non-local scenario (*-ē*), whereas the conjunct is somewhat more complex in that the direct is marked by *-ā* and the inverse by *-ikw~iko* in mixed and non-local scenarios unless the SAP involved is singular, in which case both direct and inverse are unmarked in this slot (but see further down for direction marking in slot 5 for the latter configurations). Some of the standard examples are given below; (9) shows mixed scenarios and (10) non-local configurations.

(9) PLAINS CREE SUFFIX 2: MIXED SCENARIOS (Dahlstrom 1986:68f)

a. Ni-sēkih-**ā**$_2$-w$_5$. — Ē-sēkih-**Ø**$_2$-ak$_5$.
1-frighten-DIR-3 CNJ-frighten-SAP→3-1sDIR
Both: 'I frighten him$_{prox}$.'

b. Ni-sēkih-**ikw**$_2$-w$_5$. — Ē-sēkih-**Ø**$_2$-it$_5$.
1-frighten-INV-3 CNJ-frighten-3→SAP-1sINV
Both: 'He$_{prox}$ frightens me.'

c. Ni-sēkih-**ā**$_2$-nān$_5$. — Ē-sēkih-**ā**$_2$-yāhk$_5$.
1-frighten-DIR-1p CNJ-frighten-DIR-1p
Both: 'We$_e$ frighten him$_{prox}$.'

d. Ni-sēkih-**iko**$_2$-nān$_5$. — Ē-sēkih-**iko**$_2$-yāhk$_5$.
1-frighten-INV-1p CNJ-frighten-INV-1p
Both: 'He$_{prox}$ frightens us$_e$.'

(10) PLAINS CREE SUFFIX 2: NON-LOCAL SCENARIOS (Dahlstrom 1986:68f)

a. Sēkih-**ē**$_2$-w$_5$. — Ē-sēkih-**ā**$_2$-t$_5$.
frighten-DIR-3 CNJ-frighten-DIR-3ANIM
Both: 'He$_{prox}$ frightens him$_{obv}$.'

b. Sēkih-**ikw**$_2$-w$_5$. — Ē-sēkih-**iko**$_2$-t$_5$.
frighten-INV-3 CNJ-frighten-INV-3ANIM
Both: 'He$_{obv}$ frightens him$_{prox}$.'

Interestingly enough, the morphemes *-i*, *-it* and *-iti* occurring in the local scenarios have not been treated consistently in the literature. Wolfart (1973,

1981, 1996) and Dahlstrom (1986) call the first of these "direct" and the latter two "inverse". In contrast, Hockett's writings on Potawatomi (1966, 1993) make it clear that he conceives these morphemes on a different dimension as *-ā*, *-ē* and *-ikw~iko* and therefore refrains from treating all of them on a par. Bickel (1994) considers them portmanteaus encoding person and role rather than direction in the strict sense of the term, but according to the framework used in this study there is a different type of direction focality involved, viz. high-focal instead of low-focal direction. This issue shall concern us again further down.

(11) PLAINS CREE SUFFIX 2: LOCAL SCENARIOS (Dahlstrom 1986:68f)

a. Ki-sēkih-**i**$_2$-n$_5$. — Ē-sēkih-**i**$_2$-yan$_5$.
2-frighten-2→1-sSAP CNJ-frighten-2→1-2s
Both: 'You$_s$ frighten me.'

b. Ki-sēkih-**iti**$_2$-n$_5$. — Ē-sēkih-**it**$_2$-ān$_5$.
2-frighten-1→2-sSAP CNJ-frighten-1→2-1s
Both: 'I frighten you$_s$.'

Suffix 3 (obviative subject)

These suffixes are mutually exclusive with slot 1 *-im*. The suffix *-(i)yi* appears in both the independent and the conjunct orders when an obviative 3rd person is in S or A function, except when (i) the undergoer is a plural SAP (in which case *-Ø* is used in the dependent order and *-wā* occurs in the conjunct), or (ii) the undergoer is an animate 3rd person (in which case *-Ø* appears in both orders).

(12) PLAINS CREE SUFFIX 3 I (Bickel 1994:85f, Dahlstrom 1986)

Obviative S/A:
a. *-Ø/wā* obviative→pSAP
b. *-Ø* obviative→3 animate
c. *-(i)yi* elsewhere

(13) PLAINS CREE INFLECTION, SUFFIX 3 II (Dahlstrom 1986:44f)

a. Ni-wāpam-iko$_2$-**Ø**$_3$-nān$_5$-a$_7$.
1-see-INV-OBV.S/A-1p-OBV
'He$_{obv}$ sees us.'

b. Ē-wāpam-iko$_2$-**wā**$_3$-yēkw$_5$ o-kosis-a.
CNJ-see-INV-OBV.S/A-2p 3POSS-son-OBV
'His$_{prox}$ son$_{obv}$ sees you$_p$.'

c. Wāpam-ikw$_2$-**Ø**$_3$-w$_5$. — Ē-wāpam-iko$_2$-**Ø**$_3$-t$_5$.
see-INV-OBV.S/A-3 CNJ-see-INV-OBV.S/A-3ANIM
Both: 'He$_{obv}$ sees him$_{prox}$.'

d. Ē-wāpam-Ø$_2$-**iyi**$_3$-isk$_5$ o-kosis-a.
CNJ-see-INV-OBV.S/A-2sINV 3POSS-son-OBV
'His$_{prox}$ son$_{obv}$ sees you$_s$.'

This distribution suggests a different hierarchy from the one regulating prefix marking, viz. pSAP > 3 animate > others (sSAP/3 inanimate/3 obviative), but more on hierarchies will be said in §1.4 below.

Suffix 5 (person and number)

The morphemes that appear in this slot complement those occurring in slot 2 and are relevant for the discussion of direction. Observe the forms listed in (14):

(14) PLAINS CREE SUFFIX 5 (Bickel 1994:85f, Dahlstrom 1986)

Person, number and combinations thereof:

	Independent	Conjunct	
a.	*-nān*	*-(y)āhk*	[p,+sp,-ad] (=1p) argument
b.	*-nānaw*[10]	*-(y)ahkw*	[p,+sp,+ad](=12) argument
c.	*-nāwāw*[11]	*-(y)ēkw*	[p,-sp,+ad] (=2p) argument when there is no [p,+sp] argument
d.	*-w*	*-t*	3 animate argument when there is no plural SAP argument[12]
	-w	*-k*	3 inanimate argument when there are no animate arguments
e.	*-n*	—	1s and/or 2s arguments in the TA (sSAP in the AI and in the TI)
f.	—	*-(y)ān*	1s argument when there is no 3 animate argument
g.	—	*-(y)an*	2s argument when there is no 3 animate argument
h.	—	*-ak*	1s→3 configuration (1sDIR)
i.	—	*-it*	3→1s configuration (1sINV)
j.	—	*-at*	2s→3 configuration (2sDIR)
k.	—	*-isk*	3→2s configuration (2sINV)
l.	—	*-akok*	1s→2p configuration

[10] This suffix sometimes appears reduced to *-naw*.
[11] This suffix sometimes appears reduced to *-wāw*.
[12] Intriguingly, when *-t* immediately follows slot 2 *-am*, it appears as *-k* (Dahlstrom 1986: 37).

Plural SAPs are expressed following a pattern that differs from the person-marking prefixes discussed above. The three feature combinations [+sp,+ad], [+sp,-ad] and [-sp,+ad] are distinguished in both the independent and conjunct modes (a through c). 3rd person is marked again by means of *-w* irrespective of animacy in the independent mode and by means of *-t/k* (animate) or *-k* (inanimate) in the conjunct mode (d). In addition, some person configurations have specialized suffixes in the conjunct mode (h through l).

Some singular SAPs are marked in one order or the other: the suffix *-n* appearing for 1s or 2s in the AI and TI paradigms occurs when 1s and/or 2s are arguments in the independent order of the TA (e). In the conjunct order, *-(y)ān* and *-(y)an* appear with 1s and 2s, respectively (f-g), but note that with 1s↔2s configurations it is the actor that is cross-referenced in this position:

(15) PLAINS CREE SUFFIX 5: MINIMAL LOCAL SCENARIOS (Dahlstrom 1986:68f)

a.	AI	Ē-pimipahtā-**yān**$_5$. CNJ-run-1s 'I run.'	Ē-pimipahtā-**yan**$_5$. CNJ-run-2s 'You$_s$ run.'
b.	TI	Ē-wāpaht-am$_2$-**ān**$_5$. CNJ-see-TR-1s 'I see it.'	Ē-wāpaht-am$_2$-**an**$_5$. CNJ-see-TR-2s 'You$_s$ see it.'
c.	TA	Ē-sēkih-it$_2$-**ān**$_5$. CNJ-frighten-1→2-1s 'I frighten you$_s$.'	Ē-sēkih-i$_2$-**yan**$_5$. CNJ-frighten-2→1-2s 'You$_s$ frighten me.'

Retuning to the list in (14) above, the morphemes in (h) through (k) are portmanteaus corresponding to the configurations in which they occur, and are therefore high-focal direction markers occurring with particular SAPs, as argued by Bickel (1994: 90). Consider the examples in (16). The suffixes specify neither number nor obviation of the 3rd person involved, as shown in (a) through (d). Additionally, inanimate actor forms like (e) show that what corresponds to *-it* in (f) is a combination of direction and person, not role and person.

(16) PLAINS CREE SUFFIX 5: DIRECTION MARKERS (Bickel 1994:90, Dahlstrom 1986:57)

a.	Ē-wāpam-**ak**$_5$-ik$_7$. CNJ-see-1sDIR-3pPROX 'I see them.'	b.	Ē-wāpam-**it**$_5$-ik$_7$. CNJ-see-1sINV-3pPROX 'They see me.'
c.	Ē-wāpam-im$_1$-**ak**$_5$. CNJ-see-SDIR-1sDIR 'I see him$_{obv}$.'	d.	Ē-wāpam-iyi$_3$-**isk**$_5$. CNJ-see-OBV-2sINV 'He$_{obv}$ sees you$_s$.'

e. Ē-sēkih-**iko**$_2$-**yān**$_5$.
CNJ-frighten-INV-1s
'It scares me.'

f. Ē-sēkih-**it**$_5$.
CNJ-frighten-1sINV
'He scares me.'

Notably, the access to this slot is governed by a hierarchy that differs from the one operating in the prefix position and resembles the one regulating the morphemes in slot 3. The privileged argument is the [p,+sp,-ad] (=1p) person: it is marked whenever present. Second come the [p,+sp,+ad] (=12) and the [p,-sp,+ad] (=2p) persons. Then come animate 3rd persons, followed by singular SAPs, and inanimates come last. In other words, the hierarchy is 1p > 12 /2p > 3 animate > sSAP > 3 inanimate.

Suffix 7 (number and obviation)

Basically, the morphemes in this slot mark 3p arguments, but the privileged actant among them is the 3rd person plural proximate; the latter is marked as *-ak* or *-ik* in the independent and conjunct orders, respectively (compare the proximate plural marking *-ak* on nouns). If there is no proximate actant, the slot is free for an obviative marker *-a*, unspecified for number, to appear in the independent order (compare the nominal obviative marker *-a*). Finally, in the absence of animate 3rd persons arguments, an inanimate 3rd person plural can be marked as *-a* or *-i* (the latter only in the conjunct order of the II). In other words, access to this slot is governed by the hierarchy 3prox > 3obv > 3inan.

(17) PLAINS CREE SUFFIX 7 I (Bickel 1994:85f, Dahlstrom 1986)

Number and obviation:

	Independent	Conjunct	
a.	*-ak*	*-ik*	3p proximate actant
b.	*-a*	—	obviative actant
c.	*-a*	*-i*	3p inanimate actant

(18) PLAINS CREE SUFFIX 7 II (Dahlstrom 1986:34,38f)

a. Ni-wāpam-ā$_2$-w$_5$-**ak**$_7$. — Ē-wāpam-Ø$_2$-ak$_5$-**ik**$_7$.
1-see-DIR-3-3p CNJ-see-SAP:DIR-1sDIR-3p
Both: 'I see them.'

b. Wāpam-ē$_2$-iyi$_3$-w$_5$-**a**$_7$.
see-DIR-OBV.S/A-3-OBV
'He$_{obv}$ sees him$_{obv}$.'

c. Mihkwā-w$_5$-**a**$_7$ maskisin-a. — Ē-mihkwā-k$_5$-**i**$_7$ maskisin-a.
be.red-3-pINAN show-pINAN CNJ-be.red-3INAN-pINAN shoe-pINAN
Both: 'The shoes are red.'

A historical note on pSAP↔3 forms

Dahlstrom (1989) convincingly argues that the present-day verb forms found with pSAP↔3 configurations are the result of a recent innovation that spread from inverse to direct forms, and from the independent to the conjunct order. Consider the conjunct forms given in Table III-3 below.

Table III-3
INNOVATION IN PLAINS CREE pSAP↔3 CONJUNCT FORMS

	archaic	innovative
1p→3s	Ø$_2$ -akiht$_5$	ā$_2$ -(y)āhk$_5$
1p→3p	Ø$_2$ -akiht$_5$ -ik$_7$	ā$_2$ -(y)āhk$_5$ -ik$_7$
2p→3s	Ø$_2$ -ēkw$_5$	ā$_2$ -(y)ēkw$_5$
2p→3p	Ø$_2$ -ēkw$_5$ -ik$_7$	ā$_2$ -(y)ēkw$_5$ -ik$_7$
12→3s	Ø$_2$ -ahkw$_5$	ā$_2$ -(y)ahkw$_5$
12→3p	Ø$_2$ -ahkw$_5$ -ik$_7$	ā$_2$ -(y)ahkw$_5$-ik$_7$
3s→1p	i$_2$ -(y)amiht$_5$	ikw$_2$ -(y)āhk$_5$
3p→1p	i$_2$ -(y)amiht$_5$-ik$_7$	ikw$_2$ -(y)āhk$_5$ -ik$_7$
3s→2p	it$_2$ -ēkw$_5$	ikw$_2$ -(y)ēkw$_5$
3p→2p	it$_2$ -ēkw$_5$ -ik$_7$	ikw$_2$ -(y)ēkw$_5$ -ik$_7$
3s→12	it$_2$ -ahkw$_5$	ikw$_2$ -(y)ahkw$_5$
3p→12	it$_2$ -ahkw$_5$ -ik$_7$	ikw$_2$ -(y)ahkw$_5$-ik$_7$

adapted from Dahlstrom (1989: 60)

In a gospel translation from 1855, all direct forms and one third of the inverse ones were those labeled "archaic" in Table III-3, but in a 1904 translation all forms were the innovative ones with one exception. The independent had the theme signs -*ā*$_2$ 'direct', -*ikw*$_2$ 'inverse', -*i*$_2$ '2→1' and -*iti*$_2$ '1→2' already, but notice that in the conjunct the non-zero suffixes were originally only -*i*$_2$ '1O' and -*it*$_2$ '2O'—a situation that shall concern us when comparing Plains Cree with Miami-Illinois and Central Ojibwa further down. Apparently, conjunct inverse forms became analogous to independent inverse ones—themselves a copy from the inanimate actor forms with -*ikw*$_2$—, and later this innovation spread to conjunct direct forms by eliminating Ø in slot 2.

1.3 Obviation and direction in Plains Cree discourse

As we have seen, both nouns and verbs show reflexes of the distinction between proximate and obviative. Most pronominal elements reveal the language's concern with both animacy and obviation instead of grammatical case, but this

is not all. In the relatively less frequent clauses with two lexical NPs, the sole sensitivity of constituent order to any category that is morphologically marked seems to be the preference for proximate NPs to precede obviative NPs.[13]

Let us now take a brief look at how Plains Cree uses this distinction in actual discourse. In a sense, obviation and inversion marking constitute a reference-tracking device comparable to nominal class affixes or anaphoric pronouns in other languages. In (19) below, nominal and verbal morphology make it impossible to confuse actors with undergoers :

(19) PLAINS CREE OBVIATION IN DISCOURSE I (Wolfart 1996:397)

a. Tāpwē awa iskwēw Ø-pakamahw-$\bar{e}_2$-w_5
truly DEM:PROX woman 3-strike-DIR-3
ēsa ōhi wīhtiko-wa.
REP DEM:OBV windigo-OBV
'Truly the woman$_{prox}$ struck down that windigo$_{obv}$.'

b. O-wīcēwākan-a Ø-miskaw-$\bar{e}_2$-w_5 awa nēhiyaw.
3POSS-companion-OBV 3-find-DIR-3 DEM:PROX Cree
'The Cree$_{prox}$ found his comrades$_{obv}$.'

In fact, omitting the NPs altogether does not pose a problem as long as there are not too many participants involved. Example (20) is a case in point.

(20) PLAINS CREE OBVIATION IN DISCOURSE II (Dahlstrom 1986:111)

a. "Nisto ni-nipah-$\bar{a}_2$-w_5-ak_7," Ø-it-$\bar{e}_2$-w_3.
three 1-kill-DIR-3-3pANIM 3-say-DIR-3
'"I killed three of them," he$_{prox}$ said to him$_{obv}$.'

b. "Tāpwē, wēskinīkiyin, namoya ki-kost-$\bar{a}_2$-w_5-ak_7!"
truly young.man:VOC NEG 2-fear-DIR-3-3pANIM
Ø-it-ikw$_2$-Ø$_3$-w_5.
3-say-INV-OBV.S/A-3
'"Really, young man, you are not afraid of them!" he$_{obv}$ said to him$_{prox}$.'

We know from the context that a man is talking with a boy, but it is the boy who is at the center of attention, i.e., is the proximate referent. Thanks to verb inflection, there is no need to provide the audience with either NPs or pronouns in order for them to track the referents: *itēw* in (a) tells us that the proximate

[13] Wolfart (1996: 392) mentions the properties of Plains Cree that justify calling it a non-configurational language, viz. free word order, free omission of actor and/or undergoer NPs, and discontinuous constituency. Cf. Chapter I, §2.2.

speaks to the obviative, and *itik* in (b) that it is the other way round.

A system like this works all the better due to some restrictions, however. It has been mentioned that the choice as to which 3rd person argument is obviative is not entirely free, i.e. factors different from the pragmatic notion of topicality may play a role. One of these factors is the well-known condition marking every possessed noun obviative or further obviative if the possessor is 3rd person—the crucial point being that no possessed noun may outrank its possessor on the obviation scale (more precisely, only animate possessed nouns take the obviative suffix *-a*, inanimates being superficially unmarked but triggering inanimate morphology on the verb). Consider (21) below: whereas the *-ohtāwiy* 'father' of an SAP may be proximate, the father of a 3rd person can never be:

(21) PLAINS CREE POSSESSION AND OBVIATION I (Dahlstrom 1986:116)

Ōhtāwiy-**a**	ēh-okimāw-**iyi**$_3$-t$_5$.
3POSS:father-OBV	CNJ-be.chief-OBV.S/A-3ANIM

'His$_{prox}$ father$_{obv}$ was chief.'

Further recall that, when more than one 3rd person appears in a clause, only one of them may be proximate. In (22) below, *awa nāpēsis* 'the boy' is proximate, so both *awa kākaskatahomiht* 'the man who had been wounded' and *niyānan misatim* 'five horses' have to be obviative:

(22) PLAINS CREE POSSESSION AND OBVIATION II (Dahlstrom 1986:116)

Awa	nāpēsis	**ōhi**	kā-kaskatahomiht
DEM:PROX	boy	DEM:OBV	CNJ-he.was.wounded
niyānan	Ø-miy-ē$_2$-w$_5$	misatim-**wa**.	
five	3-give-DIR-3	horse-OBV	

'The boy$_{prox}$ gave the man who had been wounded$_{obv}$ five horses$_{obv}$.'

Finally, the animacy of the NPs involved plays a crucial role in determining which verb forms are available and which are not, as discussed in Aissen (1997: 714f). The discussion of hierarchies in §1.4 below shows that TI forms with an animate actor can only be direct, but this is also the case when both arguments are inanimate, i.e., inverse inan→inan forms do not seem to occur (see Aissen 1997: 715). TA forms with an animate undergoer and an inanimate actor are always inverse, and when both arguments are animate the pragmatic and grammatical considerations mentioned above come into play in order to decide whether a direct or an inverse form is to be chosen.

1.4 Plains Cree hierarchies

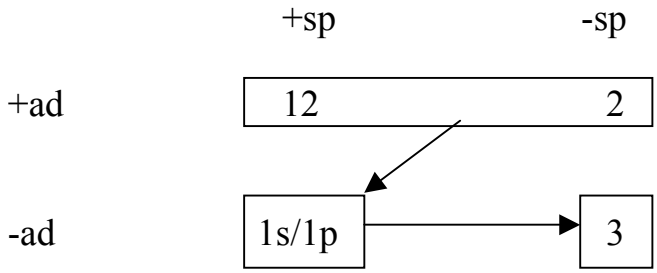
Up to this point we have seen that different slots suggest several referent hierarchies that have to be taken into account when describing Plains Cree morphosyntax. These hierarchies are summarized in (23):

(23) PLAINS CREE SLOT-SPECIFIC NOMINAL HIERARCHIES

a. Prefix: (1)2 > 1 > 3
b. Suffix 1: SAP > 3prox > 3obv > 3f.obv
c. Suffix 2: SAP > 3prox > 3obv > 3f.obv
d. Suffix 3: pSAP > 3anim > other persons
e. Suffix 5: 1p > 12/2p > 3anim > sSAP > 3inan
f. Suffix 7: 3prox > 3obv > 3inan

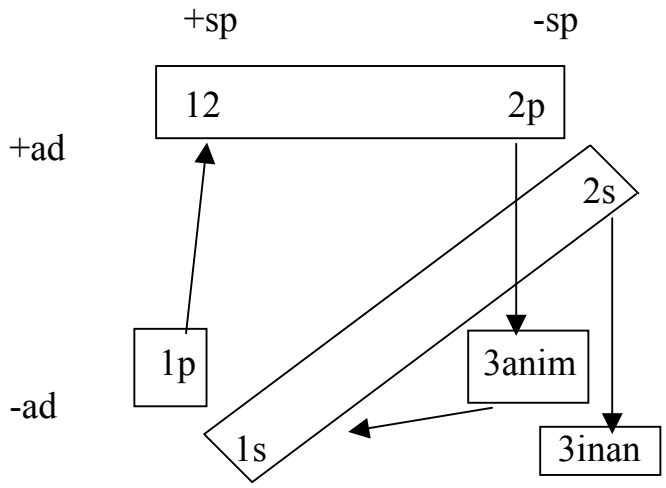
The above raises the question whether these hierarchies can be formulated as one combined hierarchy of which different slots extract only a part. While it is possible to conflate (b), (c), and (f) into a unified hierarchy SAP > 3prox > 3obv > 3inan, (a), (d), and (e) pose a problem. The hierarchy regulating the prefixes places the [+ad] persons above the [-ad] ones, and the latter are further ranked [+sp] > [-sp]; number plays no role. This situation is depicted in Figure III-1, where the arrows show the descending direction on the hierarchy.

Figure III-1
"PREFIX" HIERARCHY



In contrast, the hierarchy regulating the morphemes in suffix position 5 (as well as its simpler version, the hierarchy governing the suffixes in slot 3) includes the categories of number and animacy as well as that of person, according to the schema in Figure III-2:

Figure III-2
"3 & 5" HIERARCHY



The prefix and the 3&5 hierarchies are compatible with placing SAPs above 3rd persons and further ranking the latter according to animacy and obviation, but note that while the prefix hierarchy proceeds counter-clockwise in Figure III-1, the latter hierarchy proceeds clockwise in Figure III-2 and includes the two distinctions absent from the former hierarchy (recall that in TA forms, 1s and 2s are marked in the conjunct according to which referent has the higher role in A > O). Therefore, the answer to the question posed above is negative; there is no combined hierarchy that governs the access to all affix positions.

1.5 Preliminary summary of Plains Cree

What are, then, the principles governing the "formidable paradigms"? First, it is apparent that verb stems pattern ergatively. The factor that distinguishes between TA/TI stems on the one hand and AI/II stems on the other is the animacy of the S/O—the animacy of the actor is irrelevant.

The FORM of the prefixes is neutral to both grammatical relations and semantic roles. The markers *ki-*, *ni-* and *Ø/o-* appear irrespective of the kind of involvement of the [+ad], [+sp,-ad] and [-sp,-ad] persons as long as they are core arguments in any of the S, A or O functions. The ACCESS of the different persons to the prefix position is governed by the hierarchy:

(24) PLAINS CREE HIERARCHY I

2/12 > 1 > 3

By the same token, many suffixes (e.g. some of the markers in slot 5 and all

markers in slot 7) are not sensitive to macroroles or any restricted neutralization thereof and align neutrally as to form (except the conjunct suffixes *-(y)ān*$_5$ '1s' and *-(y)an*$_5$ '2s', which in TA forms cross-reference the actor). Nevertheless, they are regulated by hierarchies that decide which ones have preferential treatment. These hierarchies can be conflated into the following:

(25) PLAINS CREE HIERARCHY II

1p > 12/2p > 3 animate > sSAP > 3 inanimate

Note, however, that some of the suffixes that operate based upon this hierarchy do show sensitivity to macrorole: slot 3 *-(i)yi*, *-Ø* and *-wā* mark an obviative S/A and are therefore an instance of accusativity in the verb morphology.

Some of the theme suffixes in slot 2 (*-ā*, *-ē* and *-ikw~iko*) and the strong direct *-im* in slot 1 make it clear that there is an additional hierarchy of the form:

(26) PLAINS CREE HIERARCHY III

SAP > 3 proximate > 3 obviative (>3f.obv)

Since Plains Cree morphosyntax shall be discussed in Section 4 in greater detail, only locus of marking is addressed here as formal aspect. Unmistakably, only head marking is involved: all direction markers are suffixed to the verb stem. Let us now turn to the intricate functional aspects.

Direction—functional aspects

Plains Cree direction marking clearly distinguishes the local, the non-local, and the mixed domains, a distinction that cross-cuts the one between independent and conjunct orders. Local direction is marked basically by the suffixes *-i*$_2$ '2→1' and *-it/iti*$_2$ '1→2', but there is also a specialized high-local marker *-akok*$_5$ for the 1s→2p configuration. Non-local direction features the direct marker *-ē/ā*$_2$ and the inverse suffix *-ikw*$_2$. Mixed direction consists of direct *-ā*$_2$ and inverse *-ikw*$_2$, but slot 2 can also host a zero morph when direction is marked in slot 5 by means of the high-focal suffixes *-ak*$_5$ '1s direct', *-it*$_5$ '1s inverse', *-at*$_5$ '2s direct', and *-isk*$_5$ '2s inverse'. Finally, strong direct is encoded by *-im*$_1$ in both non-local and mixed scenarios.

Since (i) there is no unique relative ranking of SAPs in addition to pSAP > sSAP in the hierarchies, and (ii) neither *-i*$_2$ nor *-it/iti*$_2$ pattern together with any of the direction-marking morphemes *-ē*$_2$, *-ā*$_2$ or *-ikw*$_2$, the decision of whether to consider the local direction markers direct and inverse shall be postponed toward the end of this chapter.

Table III-4
PLAINS CREE ALIGNMENT SYSTEM (TA)

	A	S	O
1s→2p (CNJ)	{	(*-akok*$_5$)	}
3obv	{	*-Ø/wā/(i)yi*$_3$ }	—

	Prefix	s	p	Conditions
1 (1s, 1pe)	*ni-*	*-n/(y)ān*$_5$	*-nān/(y)āhk*$_5$	Prefix: Hierarchy I
12 (—, 1pi)	*ki-*	—	*-naw/(y)ahkw*$_5$	Suffix 3: Hierarchy III
2 (2s, 2p)	*ki-*	*-n/(y)an*$_5$	*-wāw/(y)ēkw*$_5$	Suffix 5: Hierarchy II
3 (3s, 3p)	*Ø-*	*-w/t/k*$_5$	*-w/t/k*$_5$*-ak/ik/a/i*$_7$	Suffix 7: Hierarchy II/III
3obv	*Ø-*	*-w/t/k*$_5$	*-w/t/k*$_5$*-a*$_7$	

Table III-5
PLAINS CREE DIRECTION MARKING (TA)

	3”→3’	3→SAP	2→1	1→2	SAP→3	3’→3”
independent	{ *-ikw*$_2$ }		*-i*$_2$	*-iti*$_2$	(*im*$_1$)*-ā*$_2$	(*im*$_1$)*-ē*$_2$
conjunct :pSAP	{ *-ikw*$_2$ }		*-i*$_2$	*-it*$_2$	{ (*im*$_1$)*-ā*$_2$ }	
conjunct: sSAP	*-ikw*$_2$	*-Ø*$_2$*-it/isk*$_5$	*-i*$_2$	*-it*$_2$	(*im*$_1$)*-Ø*$_2$*-ak/at*$_5$	(*im*$_1$)*-ā*$_2$

2. Miami-Illinois

This section discusses a lesser known and extinct Central Algonquian language originally spoken in Indiana and Illinois called Miami-Illinois or Peoria. The data are taken from Costa (1994).[14]

2.1 Essentials of Miami-Illinois

Miami-Illinois nouns distinguish singular and plural number, animate and inanimate gender, and proximate and obviative status. Incidentally observe that, unlike all other Algonquian languages except Shawnee, Miami-Illinois distinguishes between the form of the obviative singular (*-ali*) and the inanimate plural (*-a*)—recall that both are *-a* in Plains Cree.

[14] In order to facilitate comparison, I have slightly adapted the orthography here: long vowels appear as single graphs with a macron (*ā, ē,* etc.) instead of Costa’s digraphs (*aa, ee,* etc.).

(27) MIAMI-ILLINOIS NOMINAL INFLECTION[15]

	animate		inanimate
	proximate	obviative	
singular	*-a*	*-ali*	*-i*
plural	*-aki*	*-ahi*	*-a*

In addition, nouns can be inflected for possession by prefixing *ki-, ni-* and *a-*, and by suffixing some morphemes indicating number and person. The latter are similar to those appearing in a suffix position on the verb and need not concern us here. Miami-Illinois verbs also appear in four different paradigms (AI, II, TI and TA) according to the gender of the S/O argument.

2.2 The Miami-Illinois verb

The Miami-Illinois verb is modeled by Costa somewhat differently from what Dahlstrom proposed for Plains Cree. In addition to the prefix position and the stem, only suffix slots 1, 3, 5, 6 and 8 are relevant to the present discussion and will be considered here. Since only the independent and the conjunct orders will be discussed, readers interested in a treatment of the imperative order should consult Costa (1994: 242f).

Table III-6
MIAMI-ILLINOIS VERBAL TEMPLATE

-1	0	1	2	3	4	5	6	7	8
prefix	stem	theme	negation	"pre-central endings"	(TAM)	conjunct obviative	person, number	(TAM)	number, obviation

adapted from Costa (1994: 189)

Prefix (person)

Like Plains Cree, Miami-Illinois distinguishes between three morphemes in this position for the independent order, and the hierarchy governing their occurrence is [+ad] > [-ad,+sp] > [-ad,-sp].

[15] I have glossed over some frequent morphophonemic deviations from the markers given here. Cf. Costa (1994: 144f) for more details.

(28) MIAMI-ILLINOIS PREFIX

Person markers (independent):

a. *ki-* whenever a [+addressee] person is argument
b. *ni-* whenever a [+speaker] person is argument and there is no [+addressee] person argument
c. Ø- whenever there is no SAP argument

Suffix 1 (theme)

In the independent order of the TA paradigm, the suffix *-ā* marks mixed direct and *-ē* stands for non-local direct, whereas *-ekw~-eko* encodes both non-local and mixed inverse. Local scenarios show the morphemes *-i* for 2→1 and *-ele* for 1→2 in the independent order. The conjunct takes *-i* and *-el* when the undergoer is a 1st or a 2nd person, respectively—a fundamental difference both to the situation in the independent order and to what is found in Plains Cree. The reciprocal marker *-etī* and the independent passive suffix *-ekō* are also said by Costa (1994) to occur in this position. TI forms take, according to stem class, either *-am*, *-ō* or *-Ø* (in the independent order, Class I, *-am* is the allomorph for 3rd persons, and SAPs take *-a* in the singular and *-ā* in the plural; conjunct Class I forms take *-Ø* with 1p/12 actors, *-am* elsewhere).

(29) MIAMI-ILLINOIS SUFFIX 1

	Independent	Conjunct
TA		
a. *-ā*	SAP→3	3prox→3obv[16]
b. *-ē*	3prox→3obv	—
c. *-ekw~eko*	3→SAP, 3obv→3prox	3obv→3prox
d. *-i*	2→1	X→1
e. *-ele*	1→2	—
f. *-el*	—	X→2[17]
g. *-Ø*	—	SAP→3

[16] In the conjunct, the allomorph *-Ø* occurs when immediately followed by an SAP marker, and *-ā* appears elsewhere. Crucially, this means that allomorphy is not entirely dependent on argument configuration, since both the negative (slot 2) and the delayed imperative (slot 4) can appear immediately after the theme and preclude the *-Ø* from appearing even when there are SAP markers present in slot 6.

[17] In the 3s→2 configurations of the conjunct order, the expected suffix combination *-el*$_1$ + *-k*$_6$ does not appear. Instead, the synchronically aberrant portmanteau *-ehk* occurs, but it is etymologically sound: it can be traced back to a combination of the Proto-Algonquian morphemes **-eθ* and **-k*, origin of Miami-Illinois *-el*$_1$ and *-k*$_6$.

	TI		
h.	*-a~ā/ō/Ø*	SAP→3	—
i.	*-am/ō/Ø*	3→3	X→3[18]

Suffix 3 ("pre-central endings")

Two mutually exclusive morphemes may occur in the conjunct order in this slot, viz. 3p *-wā* (*-ōwā* after consonant-final stems) and indefinite actor *-en* (*-n* after vowels). Conjunct indefinite actor *-en* (P[roto-]A[gonquian] **-en*) is absent from the paradigm in one form, viz. the 1p; instead of PA **-i_1-**$\boldsymbol{n}_3$**-*$amenk_6$-i_8, Miami-Illinois has -i_1-$amink_6$-i_8.

(30) MIAMI-ILLINOIS SUFFIX 3

a. Wāpant-am$_1$-**ōwā**$_3$-k$_6$-i$_8$.
see-TR-3p-3INAN-CNJ
'They see it.'

b. Wāpam-**en**$_3$-t$_6$-i$_8$.
see-INDEF.A-3ANIM-CNJ
'He is seen.'

Suffix 5 (conjunct obviative)

In this slot the conjunctive obviative marker *-li* appears when the S is obviative (AI, a) and when an obviative acts upon another obviative (TA, b):

(31) MIAMI-ILLINOIS SUFFIX 5

a. Nēhsē-**li**$_5$-t$_6$-i$_8$.
breathe-OBV.S-3-CNJ
'He$_{obv}$ breathes.'

b. Wāpam-ā$_1$-**li**$_5$-t$_6$-i$_8$.
see-DIR-OBV→OBV-3-CNJ
'He$_{obv}$ looks at him$_{obv}$.'

Suffix 6 (person and number)

This slot hosts person markers and corresponds roughly to slot 5 in Plains Cree.

(32) MIAMI-ILLINOIS SUFFIX 6

	Independent	Conjunct	
a.	*-(m)ena*	—	[p,+sp] (=1p/12) as argument[19]
b.	—	*-ānk*[20]	[p,+sp,-ad] (=1p) as argument

[18] The allomorphy rules in the conjunct order are more complicated than implied here; cf. Appendix 1 for Class I forms and Costa (1994: 216f) for all paradigms.

[19] The form *-ena*, also found as *-enā(n),* appears in inverse TA forms and the possessive noun paradigm only.

[20] Instead of inserting *y* after vowel-final stems like the [+ad] persons, [+sp,-ad] shorten stem-final *ē* and *ī* to *i*, e.g. *nēhsē-ān*$_6$*-i*$_8$ > *nēhs**i**āni* 'I breathe' and *nēhsē-ānk*$_6$*-i*$_8$ > *nēhs**i**ānki* 'we$_e$ breathe'. Moreover, after most *ā*-final stems, this segment is simply deleted.

c.	—	*-(y)ankw*	[p,+sp,+ad] (=12) as argument
d.	*-(m)wa*	*-(y)ēkw*[21]	[p,-sp,+ad] (=2p) as argument, and there is no [+sp] argument
e.	*-w*	*-t*[22]	3 animate argument when there is no pSAP argument (AI)
	-w	*-k*[23]	3 inanimate argument when there is no pSAP argument (TI)
f.	—	*-ān*	1s argument[24]
g.	—	*-(y)an*	2s argument
h.	—	*-ak*	1s→3 (1sDIR)
i.	—	*-at*	2s→3 (2sDIR)
j.	—	*-akint*	1p→3 (1pDIR)
k.	—	*-amint*	3→1p (1pINV)
l.	—	*-amink*	1p indefinite actor
m.	—	*-akok*	1s→2p
n.	—	*-(i)li*	3obv→3obv

Suffix 8 (number and obviation)

Markers of the conjunct conditional, the iterative, and the injunctive appear in this slot. Unlike Plains Cree, Miami-Illinois retains an original Proto-Algonquian distinction between conjunct and participial forms, at least with regard to formal make-up: conjunct forms are characterized by the suffix *-i* in this position (labeled simply 'conjunct' here, admittedly a simplification), whereas participles take *-a*, but they are essentially interchangeable.[25]

(33) MIAMI-ILLINOIS SUFFIX 8

Number and obviation (independent):

	proximate	obviative
singular	*-a*	*-ali*
plural	*-aki*	*-ahi*

Conjunct suffix:

3p argument	no 3p argument	3p inanimate
-iki	*-i*	*-ia*

[21] This suffix appears as *-īkw* after *y* and *k*, and as *-ākw* in 3→2p and indefinite actor forms. *-wa* appears in independent inverse TA forms and the possessive noun paradigm only.

[22] This suffix has an allomorph *-k* after consonant-final stems.

[23] Note that an obviative actor takes *-t* instead of *-k* in this position.

[24] As in Plains Cree, 1s↔2s interactions cross-reference the A with *-ān* '1s' and *-(y)an* '2s'.

[25] Incidentally, note that Fox-Kickapoo and Shawnee retain the functional distinction as well, e.g. Fox *nēsak-i* 'when I killed him' vs. *nēsak-a* 'the one I killed'.

2.3 Miami-Illinois hierarchies

Miami-Illinois verbal prefixes are governed by the same hierarchy as those found in Plains Cree with regard to access to marking, as shown in (34). As to form, they are sensitive neither to grammatical relation nor to semantic role.

(34) MIAMI-ILLINOIS HIERARCHY I (PREFIX)[26]

(1)2 > 1 > 3

Slots 1 (theme) and 8 (number and obviation) also suggest a hierarchy that is reminiscent of the Plains Cree one:

(35) MIAMI-ILLINOIS HIERARCHY III (SUFFIXES 1 & 8)

SAP > 3prox > 3obv

Slot 6 has to be examined more closely. As with slot 5 in Plains Cree, the 1p/12 persons are marked whenever they are present in the argument structure irrespective of macrorole. Unlike with the corresponding Plains Cree suffixes, however, the independent order does not distinguish between 1p and 12 marking (*-(m)ena* covering both persons), but the conjunct order does (1p *-ānk*, 12 *-(y)ankw*). In fact, the Miami-Illinois independent order is rather simple in that only plural SAPs and 3rd persons are marked: *-(m)ena* '1p/12', *-(m)wa* '2p', and *-w* '3'. In the conjunct, plural SAPs outrank 3rd persons, which in turn outrank singular SAPs (but recall that in 1s↔2s interactions, singular SAP markers cross-reference the actor). Consequently, the hierarchy in (36) obtains:

(36) MIAMI-ILLINOIS HIERARCHY II (SUFFIX 6)

1p > 12/2p > 3 > sSAP

Furthermore, note that the portmanteau *-akok*$_6$ for the 1s→2p configuration is found as well, but only the direct counterparts of the Plains Cree direction markers are present (*-ak*$_6$ '1s direct' and *-at*$_6$ '2s direct'); cognates of Plains Cree *-it*$_5$ '1s inverse' and *-isk*$_5$ '2s inverse' are missing. This particular pattern makes sense when the yield of *-i*$_1$ and *-el*$_1$ is taken into account. Whereas Plains Cree *-i*$_2$ encodes the same information in both the independent and the conjunct order (i.e. 2→1), Miami-Illinois *-i*$_1$ means specifically '2→1' in the former order but more generally '1O' in the latter. Furthermore, Plains Cree *-iti*$_2$ means '1→2' in the independent order and *-it*$_2$ the same in the conjunct. Miami-Illinois

[26] The Roman numerals parallel those already used for Plains Cree.

independent -*ele*$_1$ encodes '1→2' but conjunct -*el*$_1$ simply means '2O'.

This brief survey of Miami-Illinois hierarchies shows that the fact that there is no unique hierarchy cannot be dismissed as a Plains Cree parochialism. Algonquian languages in general, and Miami-Illinois in particular, show an intricate interplay between different principles that govern verbal morphology. Regarding the prefix hierarchy as *the* Algonquian hierarchy is a misleading oversimplification.

2.4 Preliminary summary of Miami-Illinois

As with Plains Cree, a more detailed discussion of Miami-Illinois morphosyntax is presented in Section 4. With regard to locus of marking, all direction markers are verbal suffixes and therefore the pattern is strictly head-marking. The basic functional aspects are detailed in what follows.

Direction—functional aspects

Miami-Illinois direction marking distinguishes local, non-local, and mixed scenarios. Local direction features not only the independent focal markers -*i*$_1$ '2→1' and -*ele*$_1$ '1→2' but also the conjunct non-focal suffixes -*i*$_1$ '1O' and -*el*$_1$ '2O' in addition to conjunct high-focal -*akok*$_6$ '1s→2p'. Non-local direction shows direct -*ē/ā*$_1$ and inverse -*ekw*$_1$. Mixed scenarios display direct -*ā*$_1$ and inverse -*ekw*$_1$, but in the conjunct order a zero morph appears in slot 1 simultaneously in the SAP→3 configurations; the slot 6 mixed direction markers are -*ak*$_6$ '1s direct', -*at*$_6$ '2s direct', -*akint*$_6$ '1p direct', and -*amint*$_6$ '1p inverse'.

Table III-7
MIAMI-ILLINOIS ALIGNMENT SYSTEM (TA)

	A	S	O
1s→2p (CNJ)	{	(-*akok*$_5$)	}
1 (CNJ)	{	— }	-*i*$_1$
2 (CNJ)	{	— }	-*el*$_1$
3obv→3obv	{	-*(i)li*$_3$	}

	Prefix	s	p	Conditions
1 (1s, 1pe)	*ni-*	-*ān*$_6$	-*(m)ena/āhk*$_6$	Prefix: Hierarchy I
12 (—, 1pi)	*ki-*	—	-*(m)ena/(y)ankw*$_6$	Suffix 6: Hierarchy II
2 (2s, 2p)	*ki-*	-*(y)an*$_5$	-*(m)wa/(y)ēkw*$_6$	Suffix 8: Hierarchy III
3 (3s, 3p)	Ø-	-*w/t/k*$_6$	-*w/t/k*$_6$-*a/aki/iki/i*$_8$	
3obv	Ø-	-*w/t/k*$_6$	-*w/t/k*$_6$-*ali/ahi*$_8$	

Table III-8
MIAMI ILLINOIS DIRECTION MARKING (TA)

	3”→3’	3→SAP	2→1	1→2	SAP→3	3’→3”
independent	{ -*ekw*$_1$ }		-*i*$_1$	-*ele*$_2$	-*ā*$_1$	-*ē*$_1$
conjunct :pSAP	-*ekw*$_1$	—	—	—	-Ø$_1$	-*ā*$_1$
conjunct: sSAP	-*ekw*$_1$	—	—	—	-Ø$_1$-*ak/at*$_6$	-*ā*$_1$

3. Central Ojibwa

The name of the Central Algonquian language called Ojibwa—also known as Chippewa(y)—is sometimes spelled Ojibwe or Ojibway, and its dialects are currently spoken by some 50,000 people in Quebec, Ontario, Manitoba, Saskatchewan, Michigan, Wisconsin, and Minnesota. The variety discussed here counted approximately 7,000 speakers by the late 1970s and is what Bloomfield (1958) labels Eastern Ojibwa and Rhodes (1976) calls Central Ojibwa. I have followed the latter study for the most part in this section.[27]

3.1 Essentials of Central Ojibwa

Central Ojibwa is also a typical Algonquian language in that the relevant nominal categories are possession (not discussed here), obviation, gender, and number. The markers are as follows:

(37) CENTRAL OJIBWA NOMINAL INFLECTION (Bloomfield 1958:39, Rhodes 1976:22)

	animate		inanimate[28]
	proximate	obviative	
singular	—	-*an*	—
plural	-*ag*	-*an*	-*an*

In (38) below, the first sentence shows an animate obviative overtly marked (*wōsan* ‘his$_{prox}$ father$_{obv}$’) and the second an unmarked inanimate (*wmōkomān* ‘his$_{prox}$ knife$_{obv}$’):

[27] I have given underlying rather than surface forms in order to facilitate comparison with the other Algonquian languages discussed; the divergence between both levels of representation in Central Ojibwa is considerable. Long vowels are represented here by a single graph with a macron (e.g., *ā*). Rhodes’s orthography used either *a:* (1976) or *aa* (later studies).

[28] According to Rhodes (1976: 27, 1990a, 1994), verb agreement shows that inanimates can also be obviatives, although nominals are not marked in this case.

(38) CENTRAL OJIBWA NOMINAL OBVIATION (Rhodes 1976:200)

a. Wīninowan w-ōs-**an**.
he$_{obv}$.is.fat 3POSS-father-OBV
'His$_{prox}$ father$_{obv}$ is fat.'

b. Gīnāiniw w-mōkomān.
it$_{obv}$.is.sharp 3POSS-knife
'His$_{prox}$ knife$_{obv}$ is sharp.'

It should come as no surprise by now that Central Ojibwa verbs distinguish (i) independent, conjunct, and imperative orders, (ii) preterit, dubitative, and negative modes, and (iii) II, AI, TI and, TA paradigms. The following is a verbal template adapted from Rhodes's (1976: 287) that focuses on those positions that interest us in the present context.[29] Terminological discrepancies shall be noted in the course of the discussion of individual positions.[30] I shall be less precise here with the exact conditions determining the appearance of some affixes than with Plains Cree and Miami-Illinois for reasons explained later.

Table III-9
CENTRAL OJIBWA VERBAL TEMPLATE

-1	0	1	2	3	4	5	6	7	8	9
prefix	stem	theme	supplementary theme$_1$	negation	supplementary theme$_2$	person, number	number, obviation	3rd person	(2 TAM positions)	gender, obviation

adapted from Rhodes (1976: 287)

Prefix (person)

Central Ojibwa also distinguishes between three morphemes in this position for the independent order, and the hierarchy governing their occurrence is [+ad] > [-ad,+sp] > [-ad,-sp].

[29] As with Plains Cree and Miami-Illinois, I have not listed the suffixes that derive AI/II/TI/TA stems from roots explicitly (i.e., they are hidden in the stem). In addition, I have neglected the benefactive *-(am)aw* occurring between the stem and the theme suffix, and simply glossed over TAM morphology (position 8 consists of two "modal" subpositions 8a for preterite *-bani* and dubitative *-dig* and 8b for the further dubitative suffix *-ēn*).

[30] I will follow Rhodes's study in first presenting the inverse forms without including position 2 suffixes and introducing the latter later on (§3.2).

(39) CENTRAL OJIBWA PREFIX I

Person markers (independent):

a. *g-* whenever a [+addressee] person is argument
b. *n-* whenever a [+speaker] person is argument and there is no [+addressee] person argument
c. *w-* 3↔3 configurations
d. Ø- elsewhere

The reader will easily recognize that these morphemes are cognate with the prefixes found in both Plains Cree and Miami-Illinois. Nevertheless, there is a fundamental difference in their distribution, as shown in (40): when there is no SAP argument present in the clause, a verb is unmarked (a), unless the configuration is 3↔3, in which case *w-* (henceforth glossed '3rd person actor') is the prefix used (b):

(40) CENTRAL OJIBWA PREFIX II (Rhodes 1976:203f)

a. **Ø**-gī-goskī-w$_7$-ag$_9$ wīzāgdōdēnid.
3-PT-be.afraid-3-3p CNJ:he$_{obv}$.will.crawl.out
'They$_{prox}$ were afraid that he$_{obv}$ would crawl out.'

b. **W**-gī-wābam-ā$_1$-an$_9$ aniniw-an.
3A-PT-see-DIR-OBV man-OBV
'He$_{prox}$ saw a man$_{obv}$.'

Suffix 1 (theme)

TI forms take the transitivity markers *-ō*, *-am* or *-i* according to verb class. Independent TA forms take *-ā* (X→3prox), *-igw* (3→SAP, obv→prox), *-ini* (1→2) or *-i* (2→1) in this slot—although the 1→2 forms have been restructured by borrowing from the corresponding conjunct forms, as explained below. In the conjunct order, X→3 forms take *-ā*, and *-inin* and *-i* encode '2O' and '1O', respectively, although some local forms have been reshaped and include *-igw*.

(41) CENTRAL OJIBWA SUFFIX 1 I (TA)

	Independent	Conjunct
a. *-ā*	SAP→3, 3prox→3obv	SAP→3, 3prox→3obv
b. *-igw*	3→SAP, 3obv→3prox, 1p→2	3obv→3prox, 1p→2
c. *-i*	2→1	X→1

d.	*-ini*[31]	1s→2		—
e.	*-inin*	—		X→2p/12, 1s→2
f.	*-ik*	—		3→2s
g.	*-idi*		reflexive / reciprocal	
h.	*-igē/igā/iwē*		indefinite object	

Rhodes (1976) analyzes the suffixes in (g) and (h) as "incorporated nominals" used in reflexive / reciprocal constructions and with one of his three passives, respectively. More on Rhodes's theory of Ojibwa passives shall be said in §3.2.

TA non-local scenarios are straightforward, as the following examples show. Direct is marked by *-ā* and inverse by *-igw*:

(42) CENTRAL OJIBWA SUFFIX 1: NON-LOCAL SCENARIOS (Rhodes 1976:202)

a. Aw aniniw w-gī-wābam-**ā**$_1$-an$_9$ niw kwēw-an.
DEM:PROX man 3A-PT-see-DIR-OBV DEM:OBV woman-OBV
'The man$_{prox}$ saw the woman$_{obv}$.'

b. Aw kwēw w-gī-wābam-**igw**$_1$-an$_9$ niw aniniw-an.
DEM:PROX woman 3A-PT-see-INV-OBV DEM:OBV man-OBV
'The man$_{obv}$ saw the woman$_{prox}$.'

Mixed scenarios are clear-cut in the independent paradigm, where the same opposition holds between direct *-ā* and inverse *-igw* as with non-local configurations. Conjunct forms, however, show *-ā* with SAP→3 interactions but different morphemes with the 3→SAP configurations: *-i* with 3→1, *-inin* with 3→2p/12, and *-ik* with 3→2s:

(43) CENTRAL OJIBWA SUFFIX 1: MIXED SCENARIOS (Rhodes 1976:175f,182f,186f,190f)

	Independent	Conjunct	
a.	N-wābam-**ā**$_1$. 1-see-DIR	Wābam-**ā**$_1$-d$_7$. see-DIR-3	'I see him.'
b.	N-wābam-**igw**$_1$. 1-see-INV	Wābam-**i**$_1$-d$_7$. see-1O-3	'He sees me.'
c.	G-wābam-**ā**$_1$-wā$_6$. 2-see-DIR-2p	Wābam-**ā**$_1$-ēgw$_5$. see-DIR-2p	'You$_p$ see him.'
d.	G-wābam-**igw**$_1$-wā$_6$. 2-see-INV-2p	Wābam-**inin**$_1$-ēgw$_5$. see-2O-2p	'He sees you$_p$.'

[31] This suffix is first introduced as *-ini*$_1$ in Rhodes (1976), but it is reanalyzed as *-in*$_1$*-i*$_2$ later. This will become clear further down.

e.	G-wābam-**ā**$_1$. 2-see-DIR	Wābam-**ā**$_1$-d$_7$. see-DIR-3	‘You$_s$ see him.’
f.	G-wābam-**igw**$_1$. 2-see-INV	Wābam-**ik**$_1$. see-3→2s	‘He sees you$_s$.’

Finally, local scenarios are even less well-behaved than mixed ones. The original pattern was *-i* for 1O with both independent and conjunct forms and *-ini* and *-inin* for 2O with independent and conjunct forms, respectively. However, 1p→2 forms became *igw*-marked in the conjunct, and then independent forms followed. Rhodes (1976: 116) reports that the eastern dialects have *g-bīn-ini*$_1$-*min*$_5$ ‘we$_e$ bring you$_{s/p}$’ while Central Ojibwa distinguishes *g-bīn-igw*$_1$ ‘we$_e$ bring you$_s$’ from *g-bīn-igw*$_1$-*mw*$_5$ ‘we$_e$ bring you$_p$’ (1976: 86).

(44) CENTRAL OJIBWA SUFFIX 1: LOCAL SCENARIOS (Rhodes 1976:175f,182f,186f,190f)

	Independent	Conjunct	
a.	G-wābam-**i**$_1$. 2-see-2→1	Wābam-**i**$_1$-an$_9$. see-1O-2s	‘You$_s$ see me.’
b.	G-wābam-**ini**$_1$. 2-see-1→2	Wābam-**inin**$_1$-ān$_9$. see-2O-1s	‘I see you$_s$.’
c$_1$.	G-wābam-**ini**$_1$-min$_5$. 2-see-1→2-1p	(Wābam-**inin**$_1$-āng$_5$.) see-2O-1p	‘We$_e$ see you$_{s/p}$.’
c$_2$.	G-wābam-**igw**$_1$. 2-see-INV	Wābam-**igw**$_1$-an$_9$. see-INV-2s	‘We$_e$ see you$_s$.’
c$_3$.	G-wābam-**igw**$_1$-mw$_5$. 2-see-INV-2p	Wābam-**igw**$_1$-ēgw$_5$. see-INV-2p	‘We$_e$ see you$_p$.’

Although the labels given here to most of the theme suffixes are roughly equivalent to those given to the cognates in Plains Cree and Miami-Illinois, Rhodes (1976, 1990a, 1990b, 1991, 1994) treats many of them differently. The suffix *-igw* is called passive instead of inverse in his 1976 study for reasons that will become apparent in §3.2, and *-ā* is not viewed as direct but rather as a 3rd person object marker. The transitivity signs *-ō*, *-am* and *-i* are considered inanimate object markers, and *-i* is a 1st object marker. The suffix *-ik* is seen as allomorph of *-inin,* which is an allomorph of *-igw* (1976: 161). The morpheme *-ini* is analyzed as *-in*$_1$-*i*$_2$, which consists of the *in*-allomorph of *-igw*$_1$ and the “intransitive stem agreement” suffix *-i*$_2$ in the next slot.[32]

[32] Observe that Piggot (1989) arrives at a related but different characterization working in a formalist framework: *-i*$_1$ ‘1O’, *-ini*$_1$ ‘1A’, *-ā*$_1$ ‘3O’ and *-igw*$_1$ ‘3A’.

Suffix 2 (supplementary theme signs$_1$)

This position is labeled I[ntransitive] S[tem] A[greement] by Rhodes (1976) and is occupied by a number of suffixes subcategorized for gender: animates take *-izi*, *-i*, *-in*, *-zo* or *-Ø*, and inanimates take *-yā*, *-ad*, *-an*, *-in*, *-dē*, *-ē*, and *-Ø*. Suffice it to say here that this position will be essential when discussing Rhodes's passive account of inverse forms in §3.2.

Suffix 4 (supplementary theme sign$_2$)

This position hosts the suffix *-n*, which marks an obviative or inanimate argument in the independent order.

(45) CENTRAL OJIBWA SUFFIX 4 I

-n	inanimate O

That this position is different from slot 1 is seen from the fact that the negative morpheme *-sī* occupies slot 3:

(46) CENTRAL OJIBWA SUFFIX 4 II (Rhodes 1976:100)

a. N-bīd-ō$_1$-**n**$_4$.
1-bring-TR-TR
'I bring it.'

b. G-bīd-ō$_1$-sī$_3$-**n**$_4$.
2-bring-TR-NEG-TR
'You$_s$ do not bring it.'

Suffix 5 (person and number)

In the independent, the following markers are found with intransitive and/or local TA verb forms: *-min* '1p/12', and *-mw* '2p'. The other forms show *-nāni* '1p/12'. By contrast, conjunct forms display *-ān* '1s', *-an* '2s', *-āng* '1p', *-angw* '12', and *-wā* and *-ēgw* '2p'. Also the suffixes *-ag* '1s→3anim', *-ad* '2s→3', *-angid* '1p→3', *-aming* '3→1p', *-agogw* '1s→2p', and *-ik* '3→2s' occur in conjunct TA forms. The conditions governing the occurrence of these markers are rather complex, and some of them will be discussed in §3.2.

(47) CENTRAL OJIBWA SUFFIX 5

	Independent	Conjunct	
b.	—	*-ān*	1s argument[33]
c.	—	*-an*	2s argument
d.	*-min /nāni*	—	1p/12 argument
e.	—	*-āng*	1p argument

[33] As in Plains Cree and Miami-Illinois, 1s↔2s configurations mark the actor.

f.	—	*-angw*	12 argument
g.	*-mw/wā*[34]	*-ēgw*	2p argument
h.	—	*-ag*	1s→3
i.	—	*-ad*	2s→3
j.	—	*-angid*	1p→3
k.	—	*-aming*[35]	3→1p
l .	—	*-agogw*	1s→2p
m.	—	*-ik*	3→2s

These suffixes are also treated differently by Rhodes (1976). In particular, while some of them are labeled plural markers (*-angw*, *-angid*, *-āng*, *-nāni* and *-min* different allomorphs of '1p' and *-agogw*, *-ēgw*, *-wā* and *-mw* allomorphs of '2p'), *-ag* and *-ad* are viewed as 1st person and 2nd person subject markers, respectively (with their allomorphs *-ān* and *-an*), for reasons mentioned in §3.2.

Suffix 6 (number, obviation)

Some obviative arguments trigger the suffix *-ini* in this slot (cf. §3.2 for the exact conditions governing the alternation $-ini_6$ ~ $-an_9$ to mark obviative arguments). In addition, the suffix *-wā* denotes 3p arguments in the conjunct order; in the independent, it occurs only in TI and non-local TA forms.

(48) CENTRAL OJIBWA SUFFIX 6 I

a.	*-ini*	obviative
b.	*-wā*	3 plural

(49) CENTRAL OJIBWA SUFFIX 6 II

wīnad-**ini**$_6$-w$_7$	bīn-inin$_1$-ēgw$_5$-**wā**$_6$	w-bīd-ō$_1$-n$_3$-**wā**$_6$
be.dirty-OBV-3	bring-3→2-2p-3p	3A-bring-TR-TR-3p
'it$_{obv}$ is dirty'	'they bring you$_p$'	'they bring it'

Suffix 7 (3rd person)

Several 3rd person markers occur in this position: *-g*, *-d*, and *-w* (Rhodes 1976 labels this slot a 3rd person subject position). The first two suffixes alternate in the conjunct, the former appearing with inanimates and the latter with animates; additionally, *-g* occurs instead of *-d* after consonants. By contrast, *-w* appears on intransitives in the independent.

[34] The suffix *-mw* appears with intransitives and local TA forms only.
[35] Rhodes (1976: 287) does not list *-aming* in his template.

(50) CENTRAL OJIBWA SUFFIX 7 I

	Independent	Conjunct	
a.	—	*-g*	3rd person inanimate argument
b.	—	*-d*	3rd person animate argument
c.	*-w*	—	3rd person argument

(51) CENTRAL OJIBWA SUFFIX 7 II (Rhodes 1976:168,171)

micā-**g**$_7$	gīwē-siw$_3$-wā$_6$-**d**$_7$	gīwē-sī$_3$-**w**$_7$-ag$_9$
be.big-3INAN	go.home-NEG-3p-3ANIM	go.home-NEG-3-3pANIM
'it is big'	'they did not go home'	'they did not go home'

Suffix 9 (gender, obviation)

This slot hosts the suffixes *-ag* '3 plural animate', *-an* '3 obviative / inanimate' in the independent.

(52) CENTRAL OJIBWA SUFFIX 9

a. *-ag* 3 plural animate argument
b. *-an* 3 obviative / inanimate argument

In (53) below, *-ag*$_9$ encodes a 3rd person plural animate undergoer in (b):

(53) CENTRAL OJIBWA *-ag*$_9$ (Rhodes 1976:205)

a. Bēbēžig n-gī-wābam-ā$_1$ w-gwis-an.
one.of 1-PT-see-DIR 3POSS-son-OBV
'I saw one of his$_{prox}$ sons$_{obv}$.'

b. Nēnīž n-gī-wābam-ā$_1$-**ag**$_9$ w-gwis-an.
two.of 1-PT-see-DIR-3pANIM 3POSS-son-OBV
'I saw two of his$_{prox}$ sons$_{obv}$.'

3.2 More on Central Ojibwa morphosyntax

It goes without saying that a comprehensive account of Central Ojibwa morphosyntax cannot be the goal of the present study. However, a number of issues raised by the preliminary treatment of verbal morphology given in §3.1 are in need of clarification and/or further discussion. I shall comment in what follows on the conditions determining obviation status and obviation marking, and especially the passive analysis of inverse forms. I will then make some remarks on the terminological discrepancies noted when discussing the individual slots and finally address the problem of Central Ojibwa hierarchies.

Obviation

Since most relevant issues are similar to what has already been mentioned when discussing Plains Cree above, this account shall be rather cursory. Rhodes (1990a) distinguishes four types of obviation in Central Ojibwa: (i) possessor, (ii) clausemate, (iii) cross-clausal, and (iv) cross-sentential. Possessor obviation obligatorily stipulates that possessees of 3rd persons are obviative (nominals are overtly marked depending on the status of the possessor: *-an* if proximate and *-ini* if obviative; verb marking appears when the possessee is in S function). Clausemate obviation is normally governed by the relational hierarchy Subj > PObj > SObj > Obl in the sense that the higher argument triggers obviation status on the lower one—an issue that will be discussed in greater detail in Section 4. Cross-clausal obviation refers to the subject of a matrix clause controlling obviation of the subject of adverbial adjunct clauses and non-quote complement clauses. Finally, cross-sentential obviation is governed by pragmatic considerations (topical 3rd person arguments in a given passage being proximate, all other 3rd persons being obviative). Since the argument controlling obviation status must be animate, it appears that obviation is a complex syntactic, pragmatic, and semantic phenomenon.

The alternation between *-ini*$_6$ and *-an*$_9$, i.e. verbal obviation marking, is rather complex and only the essentials can be given here—the interested reader is referred to Rhodes (1976: 199f) and Rhodes (1990a) for more details. Basically, these two markers never cooccur, and the unmarked member of the opposition is *-ini*$_6$. Table III-10 gives an overview:

Table III-10
VERBAL OBVIATION IN CENTRAL OJIBWA

	animate		inanimate
	independent	conjunct	
S	*-an*$_9$	*-ini*$_6$	*-ini*$_6$
O	Ø~*-an*$_9$	Ø	Ø
A	*-ini*$_6$	*-ini*$_6$	Ø

adapted from Rhodes (1976: 206)

Verbal obviative marking is exemplified by the independent clauses in (54). The (a)-sentences show animate and inanimate obviative S's, respectively. The (b)-examples illustrate O-marking, either Ø in the SAP→3" interaction or *-an*$_9$ with the 3→3 configuration. Finally, (c) shows an instance of A-marking.

(54) CENTRAL OJIBWA VERBAL OBVIATION (Rhodes 1976:200,204,209)

a$_1$. Wīnino-w$_7$-**an**$_9$ w-ōs-an.
be.fat-3-OBV 3POSS-father-OBV
'His$_{prox}$ father$_{obv}$ is fat.'

a$_2$. Gīnā-**ini**$_6$-w$_7$ w-mōkomān.
be.sharp-OBV-3 3POSS-knife
'His$_{prox}$ knife$_{obv}$ is sharp.'

b$_1$. N-gī-wābam-ā$_1$(*-an$_9$) w-gwis-an.
1-PT-see-DIR(-OBV) 3POSS-son-OBV
'I saw his$_{prox}$ son$_{obv}$.'

b$_2$. W-gī-wābam-ā$_1$-**an**$_9$ w-gwis-ini.
3A-PT-see-DIR-OBV 3POSS-son-OBV
'He$^i_{prox}$ saw his$^j_{obv}$ son$_{obv}$.'

c. Žābdīs w-gwis-an w-gī-wābam-ā$_1$-**ini**$_6$ Bīyē-nan.
J. 3POSS-son-OBV 3A-PT-see-DIR-OBV P.-OBV
'John's$_{prox}$ son$_{obv}$ saw Peter$_{obv}$.'

Inverse as passive

The hallmark of Rhodes's analysis of inverse forms is the fact that they are thought of as passives. In order to better understand this claim, let me first sketch Rhodes's (1991) view of passives in general in Central Ojibwa.

There are three constructions that are both formally and functionally related, viz. Passive$_1$ (which corresponds to what is called passive or indefinite actor forms in the other languages, as we will see in §4.1), Passive$_2$ (equivalent to what is called "passive reflexive" in Menomini by Bloomfield 1962), and Passive$_3$ (labeled "lexical passive" by Rhodes and treated under "verbs of undergoing" by Bloomfield 1962):

(55) CENTRAL OJIBWA PASSIVES (Rhodes 1991:314, 1976:118f)

a$_1$. PASS$_1$ Gdakīmnā g-wī-makam-**igw**$_1$-**i**$_2$-min$_5$.[36]
our.land 2-FUT-take.from-INV-ISA(anim)-1p
'Our$_i$ land will be taken from us$_i$.'

a$_2$. PASS$_1$ "…" gī-in-**ā**$_1$-w$_7$-ag$_9$.
PT-tell-DIR?-3-3pANIM
'"…" they were told.'

[36] The verb form erroneously appears with the past marker *gī-* in the original (Rhodes p.c.).

a_3. $PASS_1$ Mīš mīnwā gonda nīž gī-nandom-**ind**-wā$_6$.
then also these two PT-ask-IND-3p
'Then these two were also questioned individually.'

b_1. $PASS_2$ Gī-nangwah-**igā**$_1$-**zo**$_2$-wā$_6$-ag$_9$.
PT-bury-INDEF.O-ISA(anim)-3p-3pANIM
'They were buried.'

b_2. $PASS_2$ Mī daš wmōdensing da-apd-**igā**$_1$-**de**$_2$-g$_7$.
and.then one's.pocket FUT-be.at-INDEF.O-ISA(inan)-3INAN
'Then it is to be put in one's pocket.'

c_1. $PASS_3$ Minopw-**igw**$_1$-**izi**$_2$-w$_7$.
taste.good-INV-ISA(anim)-3
'He (e.g. a fish) tastes good.'

c_2. $PASS_3$ Minopw-**igw**$_1$-**ad**$_2$-w$_7$.
taste.good-INV-ISA(inan)-3
'It tastes good.'

Since it is the least important for our purposes, let me briefly address $PASS_3$ first (c-examples above). These forms are generally built on TA stems by suffixation of *-igw*$_1$ and *-izi*$_2$ or *-ad*$_2$ according to gender (which yields the surface forms *-igozi* and *-igwad*, respectively). Observe that the latter morphemes are some of Rhodes's ISA markers occurring in slot 2. Verbs appearing in these arguably lexicalized constructions are conjugated according to the AI/II paradigms and include experiencer verbs like *inaw-* 'seem', *itaw-* 'hear, sound like', *imām-* 'smell', *enim-* 'think', and the like. Those $PASS_3$ verbs that refer to transportation and apparently take a zero allomorph of the ISA marker in slot 2 are conjugated according to the AI paradigm.

$PASS_2$ (b-examples above) is generally built on TI stems and is conjugated either as an AI or an II form. It is characterized by the "incorporated indefinite object nominal" *-igā*$_1$ and the ISA markers *-zo*$_2$ and *-de*$_2$ according to gender. Unlike $PASS_3$, this construction is productive.

$PASS_1$ is built on TA stems, and its primary argument (S if it is considered a true passive, O if it is rather an indefinite actor construction) must be animate. Interestingly, the paradigm of this type is more complex than those of $PASS_2$ and $PASS_3$. Observe the distribution given in (56):

(56) CENTRAL OJIBWA PASSIVE$_1$ MORPHOLOGY

	Independent	Conjunct
a. SAP	*-igw*$_1$*-i*$_2$-[AI ending]	*-igw*$_1$*-i*$_2$-[AI ending]
b. 3rd person	*-ā*$_1$-[AI ending]	*-ind*

First note that Rhodes postulates the ISA marker -i_2 for the forms taking the inverse morpheme -igw_1, i.e. those with SAPs as primary arguments; this combination surfaces as -$igō$, and the AI endings follow. Second, 3rd person forms take the direct suffix -$ā_1$ in the independent but a different and hitherto not mentioned morpheme -*ind* (which is not followed by the normal AI endings but only by 3p -$wā_6$).

Readers questioning the relevance of this excursus for a discussion of direction marking should notice that, after approximately one third of the 1976 study, Rhodes includes these -i_2's in his glosses of inverse forms as well—unlike in his subsequent studies, where only -igw_1 appears. Furthermore, the -$ā_1$ occurring in passive forms is said to be an allomorph of the passive -igw_1-i_2 for 3rd person (1976: 120), just like -in_1 '1→2' is said to be an allomorph of -igw_1 (1976: 161). In Rhodes's view, inverse forms are passive in that the verb form is detransitivized and the roles and grammatical relations are remapped: -igw_1 is a passive, not an inverse, suffix. Since this issue shall concern us in §4.2 in more detail, suffice it to say here that his analysis amounts to postulating roughly the following steps (summarized in Table III-11 below).

Table III-11
CENTRAL OJIBWA: INVERSE-AS-PASSIVE ANALYSIS

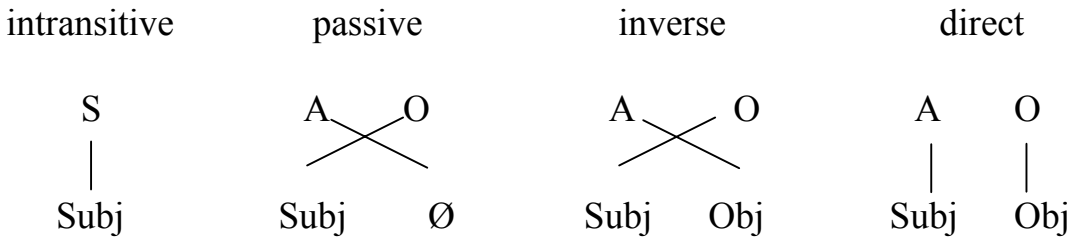
	Inverse	Passive$_1$
a) TA stem is derived from transitive root	*bī**n***	*bī**n***
b) passive morphology	*bīn-**igw**$_1$*	*bīn-**igw**$_1$*
c) ISA suffix	*bīn-igw$_1$-**i**$_2$*	*bīn-igw$_1$-**i**$_2$*
d) chômeur advancement	(3pObl ⇒ 3pPObj)	—
e) further agreement & spelling rules	***g**-bīn-igw$_1$-i$_2$-**wā**$_6$*	***g**-bīn-igw$_1$-i$_2$-**mw**$_5$*
f) morphophonemics	*gbīngwā* 'they bring you$_p$'	*gbīngōm* 'you$_p$ are brought'

First, a transitive verb (a) is detransitivized by means of passivization (b). Then, the intransitive stem agreement marker is in order (c), followed by the rest of the morphology cross-referencing the argument(s) involved (e) before morphophonemic rules determine the surface form (f). Several steps have been summarized here and the reader is referred to Rhodes (1976: 194) for a complete listing. What distinguishes inverse form from passives is not only that in the former the argument structure consists of two arguments (an O, the derived subject, and an A, the demoted oblique) while in the latter only one is present (the A has been demoted and actually suppressed from the clause) but

also that the oblique argument in the inverse is given object status; this process is termed chômeur advancement by Rhodes, following RG (d). In other words, inverse verb forms are re-transitivized intransitives that in the process have remapped macroroles onto grammatical relations so as to have actor objects and undergoer subjects.

The consequences of the above are far-reaching. The inverse-as-passive analysis postulates at least the four types of mapping between macroroles and grammatical relations illustrated in Figure III-3:

Figure III-3
CENTRAL OJIBWA CLAUSE MAPPINGS



Such an account is not merely a description of something that happens in the syntax under a surface morphology, because the yield of most verb affixes cannot be properly understood without the syntactic information. In fact, the prefixes *n-* and *g-* are no longer neutral markers that refer to the SAPs irrespective of semantic or syntactic information: they are subject markers.

Incredulous readers ought to notice that intransitive verbs trivially cross-reference their single argument by means of their prefix marking in the independent order. TI forms mark their A's, and TA mark their subjects, assuming Rhodes's proposal is a correct description of the morphosyntax:

(57) CENTRAL OJIBWA SUBJECT MARKING (PREFIXES)

a. **g**-bīn-ā$_1$
2Subj-bring-DIR
'you$_s$ bring him$_{obv}$'
direct: Subj=2s, Obj=3s

g-bīn-igw$_1$-i$_2$
2Subj-bring-INV-ISA(anim)
'he$_{prox}$ brings you$_s$'
inverse: Subj=2s, Obj=3s

b. **g**-bīn-i$_1$
2Subj-bring-1O
'you$_s$ bring me'
direct: Subj=2s, Obj=1s

g-bīn-in$_1$-i$_2$
2Subj-bring-INV-ISA(anim)
'I bring you$_s$'
inverse: Subj=2s, Obj=1s

Some of the issues raised by such an analysis shall be addressed in Section 4. At this point it is sufficient to note the fundamental difference between Rhodes's account of Central Ojibwa and what we have seen for Plains Cree and Miami-Illinois in the preceding sections. While all three analyses are syntactic in that they have to postulate S/A or S/O pivots in order to explain at least some parts of the morphology, only Rhodes's is syntactic in the sense that verb morphology cannot be elucidated without postulating syntactic rules and processes like passivization and chômeur advancement. This leads Rhodes to postulate the dichotomy between morphological and syntactic inversion. Clearly, Central Ojibwa is on the syntactic side.

Terminological discrepancies

Some additional comments ought to enable the reader to properly contextualize essential and superficial differences between the analyses of the Algonquian languages sketched hitherto.

First, Rhodes's calling -*igw*$_1$ passive instead of inverse is clearly a profound analytical difference that goes beyond the controversy mentioned in Chapter II. Notice that the claim here is not that inverse clauses can be unmasked as passives upon close inspection but that inverse clauses are passives made transitive. Therefore, in terms of the three-tiered framework developed in Chapter II this claim amounts to postulating hierarchical alignment; some argument configurations select specific clause and alignment types according to whether they comply with syntactic, pragmatic, or semantic hierarchies or not.

Second, labeling -*ā*$_1$ an object marker instead of direct illustrates a rather frequent analytical dilemma posed by languages showing similar patterns. Although an object marker and a direction marker have been traditionally taken to be quite different things, in the present framework true 3O markers and direct markers can be seen as non-focal and low-focal variants of direction markers. In this case, however, such a characterization is linked to Rhodes's "syntactic analysis". Unlike Plains Cree, Central Ojibwa does not distinguish SAP→3 from 3'→3" interactions, so Rhodes's account of animate 3rd person markers seems to be justified: *w*- for A, -*ā*$_1$ for O, and -*w*$_7$ with a rather complicated distribution that includes the S function. Consider e.g. the opposition between -*ā*$_1$ '3O' and -*igw*$_1$ 'passive':

(58) CENTRAL OJIBWA 3RD PERSON FORMS (SELECTION)

w-bīn-ā$_1$-an$_9$	w-bīn-igw$_1$-i$_2$-an$_9$	Ø-bīn-ā$_1$-w$_7$
3A-bring-3O-OBV	3A-bring-PASS-ISA-OBV	Ø-bring-PASS-3S
3A-bring-DIR-OBV	3A-bring-INV-(ISA-)OBV	3-bring-DIR-3
'he$_{prox}$ brings him$_{obv}$'	'he$_{obv}$ brings him$_{prox}$'	'he$_{prox}$ is brought'

The first interlinear gloss represents Rhodes's analysis and the second the account along more "traditional" lines (which does not postulate underlying -i_2 in inverse forms, as we shall see in Section 4).

Further observe that the inverse-as-passive account displays some intricacies as well. Direct and inverse clauses are distributed according to the person hierarchy 2 > 1 > 3 (1976: 85) but are not morphologically homogeneous; direct forms have object markers while inverse forms take passive markers, albeit only in the independent order. In the conjunct, only subject and/or object markers appear and the opposition direct versus inverse is absent. (Of course, conjunct normal passive forms do exist.) In other words, a 1st person object is marked differently in the independent order depending whether the form is direct or inverse; in the former case, a marker -i_1 '1O' is used, while in the latter a secondarily transitivized igw_1-passive form with a 1st person subject appears marked with *n*- '1'. The same holds for the 3rd person, as mentioned above: direct forms take a marker -$\bar{a}_1$ '3O' and inverses are $\bar{a}_1$-passives with a w_7-marking for 3rd person. 2nd person objects appear only in inverse (i.e. passive) forms, but with two allomorphs: -$inin_1$ when the A is 1st person and -igw_1 with 3A. This is summarized in Table III-12:

Table III-12
ACCOUNTS OF SELECTED THEME SUFFIXES IN CENTRAL OJIBWA

	traditional	Rhodes (1976)
-$\bar{a}_1$	direct	3O ~ passive
-igw_1	inverse	passive
-i_1	2→1 / direct	1O
-$inin_1$	1→2 / inverse	passive

In other words, the traditional analysis presents an elegant picture of non-passive forms. Some scholars treat the local configuration theme suffixes as something different from the opposition direct versus inverse while others prefer to give a unified account, but both variants agree on preferring clear-cut non-passive paradigms and, notably, on leaving the suggestive morphology of simple passive forms largely unexplained. On the contrary, Rhodes (1976) presents a unified account of all forms, both (i) active and passive and (ii) independent and conjunct. The price he pays for such a global scope is that particular paradigms look less appealing due to what might be called an inflation of passives.

Central Ojibwa hierarchies

The prefixes differ from those in Plains Cree and Miami-Illinois because of the presence of the marker *w-* in the non-local scenarios, but this fact does not affect the hierarchy governing their appearance: 2 > 1 > 3. The choice between direct (active) and inverse (passive) clauses is determined by the same hierarchy, with the additional 3' > 3" component where proximates outrank obviatives.

The situation with the person markers occurring in slot 5 is less straightforward. They behave similarly to their counterparts in the other two languages, but in the local scenarios some innovation and dialectal variation can be appreciated. Consider the forms in (59):

(59) OJIBWA INDEPENDENT LOCAL FORMS, DIALECTAL VARIATION (Rhodes 1976:159)

	Central / Parry Island	Eastern
a_1. 2s→1s	g-wābam-i_1	=
	2-see-2→1	
a_2. 2p→1s	g-wābam-i_1-mw_5	=
	2-see-2→1-2p	
a_3. 2→1p	g-wābam-i_1-min_5	=
	2-see-2→1-1p	
b_1. 1s→2s	g-wābam-ini_1	=
	2-see-1→2	
b_2. 1s→2p	g-wābam-ini_1-mw_5	=
	2-see-1→2-2p	
b_3. 1p→2s	g-wābam-igw_1-i_2	g-wābam-ini_1-min_5
	2-see-INV-ISA	2-see-1→2-1p
b_4. 1p→2p	g-wābam-igw_1-i_2-mw_5	g-wābam-ini_1-min_5
	2-see-1→2-2p	2-see-1→2-1p

It is apparent that 2→1 forms behave like in the other languages. Eastern 1→2 forms mirror 2→1 forms in that the hierarchy 1p > 2p determines which argument is marked in slot 5, and singular arguments are unmarked. However, the Central Ojibwa paradigm is asymmetrical: 1→2 forms distinguish all four possible cases and clearly privilege 2p marking, so that the overall pattern is one of (i) plural SAPs outranking singular SAPs, (ii) undergoer outranking actors, and (iii) the aberrant case *g-wābam-igw*$_1$*-i*$_2$ 'we$_e$ see you$_s$', which should have taken 1p marking, failing to do so.

Thus, Central Ojibwa is typically Algonquian in that there are several hierarchies playing an important role in its morphosyntax, but it is unlike Plains Cree and Miami-Illinois in that there seems to be a reshaping of the paradigms

taking place, whereby the move is—assuming that Rhodes's inverse-as-passive analysis is correct—toward subject marking.

3.3 Preliminary summary of Central Ojibwa

Following Rhodes, the fundamental reflex of the indexability hierarchy 2 > 1 > 3' > 3" in Central Ojibwa grammar is the choice between direct and inverse clauses in all three domains (local, mixed, and non-local), which amounts to saying that higher arguments are subjects (marked by prefixes in the independent) while lower ones are objects (marked by suffixes). Some of the suffixes are non-focal undergoer markers (e.g. -i_1 '1O' and -$\bar{a}_1$ '3O', but also the inanimate stem agreement signs -$\bar{o}_1$, -i_2 and others) while others can be seen as high-focal variants since they are reserved for specific personal configurations, viz. -ag_5 '1s→3', -ad_5 '2s→3', -$agogw_5$ '1s→2p', -$angid_5$ '1p→3' and the like. The passive morphemes -igw_1 and -in_1 with their allomorphs -$\bar{a}_1$, -$inin_1$ and -ik_1 encode neither person nor direction in a syntactic analysis; they are voice markers.

Apart from the fact that all these patterns are head-marking, more remarks on formal aspects are found in Section 4.

4. Toward Algonquian grammatical relations

Early descriptions of Algonquian languages regarded inverse forms, i.e. those taking a reflex of Proto-Algonquian *-*ekw*, as passives. While some studies argued against such a view (Bloomfield 1962 for Menomini, Wolfart 1973 and Dahlstrom 1986 for Cree, Goddard 1979a for Delaware), other scholars have considered inverse forms traditional detransitivized passives (LeSourd 1976 for Fox, Jolley 1982 for Cree).[37] Moreover, Rhodes's account of the Ojibwa inverse forms is, as we have seen in the preceding section, in terms of a re-transitivized passive (1976, 1994). It is important to keep in mind that, although the bulk of this chapter has followed what appears to be the mainstream Algonquianist view, a recent study by Dryer (1997) has even argued that the choice between the first and the third option may be considered indeterminate.

Section 4.2 below deals with this subject, but first we need to discuss the forms not addressed so far that will play an important role in the argumentation. Notably, scholars have not reached a consensus as to the best characterization of these forms either. While Dahlstrom (1986), Rhodes (1994) and Goddard

[37] The interested reader is referred to Wolfart (1973: 26f) and Dahlstrom (1986: 73) for a more detailed survey of the different positions.

(2000) label them "passive", Wolfart (1973, 1996) calls them "indefinite actor paradigm". As we shall see in §4.1, there are good reasons for this disagreement. The next subsection also includes a brief note on a further paradigm called "relational".

4.1 More Algonquian paradigms

Agentless forms

Plains Cree agentless forms found with TA and TI verbs take the personal suffixes in slot 5 in both the independent and the conjunct orders with SAPs, but they are additionally marked by a morpheme *-ikawi* between the stem and the personal marking, presumably in the theme slot (possibly rather bimorphemic *-ikaw-i*, following Rhodes's account of Central Ojibwa passive forms). By contrast, 3rd person forms do not take the latter suffix but are marked for 3rd person and animacy and number in slots 5 and 7. In fact, they look somewhat like active forms in that they take the theme suffix *-ā* in slot 2, and the strong direct suffix *-im* in slot 1 when the undergoer is obviative. In the conjunct order, 3rd person forms are characterized by *-iht*. Some examples follow:

(60) PLAINS CREE AGENTLESS FORMS (Dahlstrom 1986:68f,88)

a.	Ni-sēkih-**ikawi**-n_5	vs.	Ni-sēkih-ikw_2-w_5.	[INDEP]
	1-frighten-IKAWI-sSAP		1-frighten-INV-3	
	'I am frightened.'		'He frightens me.'	
b.	Ē-sekih-**ikawi**-yān$_5$.	vs.	Ē-sēkih-it$_5$.	[CNJ]
	CNJ-frighten-IKAWI-1s		CNJ-frighten-1sINV	
	'I am frightened.'		'He frightens me.'	
c.	Sākih-**ā**$_2$-w_5.	vs.	Sākih-**ē**$_2$-w_5.	[INDEP]
	love-DIR?-3		love-DIR-3	
	'He$_{prox}$ is loved.'		'He$_{prox}$ loves him$_{obv}$.'	
d.	Ni-kiskēyim-ā$_2$-w_5-ak$_7$	ē-kī-sēkih-**iht**-ik$_7$.		[CNJ]
	1-know-DIR-3-3p	CNJ-PRET-frighten-IHT-3p		
	'I know they were frightened.'			

Costa (1994) postulates the passive morpheme *-ekō*$_1$ for the corresponding Miami-Illinois forms, which does not appear to be further analyzable. However, recall that Rhodes (1976) suggests underlying *-igw_1-i*$_2$ as passive markers corresponding to the surface realization *-igō* in Central Ojibwa—an analysis that renders, as we have seen, passive forms similar to inverse verb forms.

Dahlstrom (1986) observes that constructions with agentless forms and overt

actor NPs are ungrammatical in Plains Cree; these verb forms impose a restriction on the clause in this respect, even when the actor is present in the linguistic or extra-linguistic context. Constructions equivalent to English *someone saw me* exist, but they are exact parallels in that they include a pronoun like *awiyak* 'someone' and a normal inverse verb from the TA paradigm. This fact alone, however, neither proves nor contradicts that the agentless forms are passive.

Observe the morphological make-up of agentless forms. Independent forms where the involved person is an SAP may be thought of as an inverse of sorts, but those with 3rd persons are rather like a direct. In fact, Wolfart (1973, 1996) prefers to treat 3rd person undergoer forms as part of the normal TA paradigm and only SAP undergoer forms as indefinite agent ones. Consider the forms given in Table III-13 below.

Table III-13
ALGONQUIAN AGENTLESS FORMS
(TA, INDEPENDENT ORDER, SUFFIXES)

	Plains Cree	Miami-Illinois	Central Ojibwa
1s	-ikawi-n_5	-ek$\bar{o}_1$	-igw$_1$-i$_2$
1p	-ikawi-n$\bar{a}n_5$	-ek$\bar{o}_1$-mena$_6$	-igw$_1$-i$_2$-min$_5$
2s	-ikawi-n_5	-ek$\bar{o}_1$	-igw$_1$-i$_2$
2p	-ikawi-n$\bar{a}$w$\bar{a}$w$_5$	-ek$\bar{o}_1$-mwa$_6$	-igw$_1$-i$_2$-mw$_5$
12	-ikawi-n$\bar{a}$naw$_5$	-ek$\bar{o}_1$-mena$_6$	-igw$_1$-i$_2$-min$_5$
(inverse suffix:	-ikw	-ekw	-igw)
3sprox	-$\bar{a}_2$-w$_5$	-$\bar{a}_1$-w$_6$-a$_8$	-$\bar{a}_1$
3pprox	-$\bar{a}_2$-w$_5$-ak$_7$	-$\bar{a}_1$-w$_6$-aki$_8$	-$\bar{a}_1$-w$_7$-ag$_9$
3sobv	-im$_1$-$\bar{a}_2$-w$_5$-a$_7$	—	-$\bar{a}_1$-w$_7$-an$_9$
(direct suffix1:	-$\bar{e}$	-$\bar{e}$	-$\bar{a}$)
(direct suffix2:	-$\bar{a}$	-$\bar{a}$	-$\bar{a}$)

The morphology of the conjunct forms (Table III-14) is even more revealing, and the original pattern can be seen in the reconstructed forms (Table III-15). The Miami-Illinois paradigm is close enough to the Proto-Algonquian one: PA *-*i* / Miami-Illinois -*i* stand, as we have seen, for 1st person undergoer, and PA *-*eθ* / Miami-Illinois -*el* encode 2nd person undergoer. The suffix *-*en* / -*en* is called "indefinite actor" and appears throughout. 3rd person forms occur with the zero allomorph of the direct theme sign. Plains Cree appears to have restructured the conjunct paradigm following the pattern of the independent with plural SAPs, but the 3rd person forms still show the reflex of PA *-*en*

(usually, the "passive" ending *-iht* is given as a monomorphemic unit, but well-known Cree rules derive *i* from PA **e* and *ht* from PA **nt*, so I see no reason not to analyze *-iht* as *-in-t*). Finally, note that Plains Cree forms with obviative arguments take the strong direct suffix *-im* (even Proto-Algonquian forms do), which appears only in transitive forms.

Table III-14
ALGONQUIAN AGENTLESS FORMS
(TA, CONJUNCT ORDER)

	Plains Cree	Miami-Illinois	Central Ojibwa
1s	-ikawi-yān$_5$	-i-n-k-i	-igw$_1$-i$_2$-ān$_5$
1p	-ikawi-yāhk$_5$	-i-amink-i	-igw$_1$-i$_2$-āng$_5$
2s	-ikawi-yan$_5$	-el-en-k-i	-igw$_1$-i$_2$-an$_5$
2p	-ikawi-yēkw$_5$	-el-en-ākw-i	-igw$_1$-i$_2$-ēgw$_5$
12	-ikawi-yahkw$_5$	-el-ankw-i	-igw$_1$-i$_2$-angw$_5$
3sprox	-in-t$_5$	-en-t-i	-ind[38]
3pprox	-in-t$_5$-ik$_7$	-en-t-iki	-ind-wā$_6$
3sobv	-im$_1$-in-t$_5$-ik$_7$	—	n.a.

Table III-15
PROTO-ALGONQUIAN AGENTLESS FORMS
(TA, CONJUNCT ORDER)

1s	*-i-n-k
1p	*-i-n-amen-k
2s	*-eθ-en-k
2p	*-eθ-en-ākw
12	*-eθ-en-ankw
3sprox	*-Ø-en-t
3pprox	*-Ø-en-t
3sobv	*-Ø-em-en-t

from Goddard (2000: 104f, 112f)

The central unresolved issue is why the agentless forms have the morphology they have. The traditional analysis leaves unexplained why SAP forms look inverse while 3rd person forms look direct, and Rhodes (1976) does not

[38] Rhodes (1991) mentions some morphophonemic quirks regarding *-ind* that cast doubt on a direct link between this suffix and the proposed etymology **-en-t*, but he propounds neither an alternative origin nor a morphemic break-up for it.

account for the passive allomorphy *-igw*$_1$*-i*$_2$ ~ *-ā*$_1$ in Central Ojibwa. Studies addressing the historical development of Algonquian verb forms (e.g. Bloomfield 1946, Proulx 1984, 1985, Goddard 1979a, 1979b, 2000) do not posit the ISA suffix *-i*$_2$ postulated by Rhodes (1976) for Central Ojibwa in inverse forms, which means that mainstream Algonquianists feel at least reasonably comfortable with a reconstruction along the lines sketched for Plains Cree and Miami-Illinois.

To be sure, the traditional account does not explain the passive suffixes *-ikawi* or *-ekō* in Plains Cree and Miami-Illinois, respectively, but Rhodes's *-igw*$_1$*-i*$_2$ hypothesis is not entirely unproblematic. Consider the systematic homonymous underlying representation of forms like those in (61):

(61) CENTRAL OJIBWA UNDERLYINGLY HOMONYMOUS FORMS (Rhodes 1976:151)

a. gwābmig	b. gwābmigō
g-wābam-igw$_1$-i$_2$	g-wābam-igw$_1$-i$_2$
2-see-PASS-ISA	2-see-PASS-ISA
'he$_{prox}$ sees you$_s$'	'you$_s$ are seen'

Rhodes shows that there are other instances of *gw-i* → *gō* and *gw-i* → *go* elsewhere in the language, e.g. *mitigw-ing* → *mtigōng* 'in the tree' and *gāgw-ing* → *gāgong* 'like a porcupine' (here without grammatical correlate as in the verb forms, however). He concludes from a PASS$_3$ form like *minop-igw*$_1$*-izi*$_2$*-w*$_7$ → *mnopgozi* 'he tastes good' "that it is the contraction of the uncontroversial passive form that needs explaining, not the contraction of the inverse form […]" (1976: 151). In other words, Rhodes's hypothesis is at best as good as the traditional account in this particular respect.[39]

An interesting feature of Blackfoot paradigms that would seem to shed some light on the passive forms is the fact that there are some *i*'s in the proximity of, or perhaps within, the theme slot. According to Taylor (1969: 282f), the rather complicated picture showing complex allomorphy rules according to TAM and order categories includes the following theme signs: *-ā* 'direct', *-o* '1→2', *-ōk(i)*

[39] Nevertheless, Rhodes's current proposal is somewhat different from what has been sketched hitherto. In contrast to what is posited e.g. in (61) above, he now analyzes PASS$_1$ *-igō* as developing from **-igw-e* whereas the inverse form is underlyingly **-igw-i*. The evidence in favor of such an analysis includes the following: (i) The 1→2 marker is *-in*$_1$ in the conjunct (*-inin* is a recent Central Ojibwa innovation) and *-ini*$_1$ in the independent; the latter suffix reconstructs as **-in-e*. (ii) In general, C*w-w* is reduced to C*w* (which explains e.g. *-yangw*$_5$*-wā*$_6$ → *-yangwā*). However, *-igw*$_1$*-wā*$_6$ yields *-igowā*, suggesting that there is an underlying segment between both *w*'s. Finally, Rhodes is "no longer convinced that you have to detransitivize on the way to inverses. My current thinking is that [-i$_2$] is what RG […] call[s] registration. It registers demotion to primary object" (p.c.).

'2→1, inverse'.[40] 3→SAP forms take *-ōk* except if the undergoer is 1st person plural, in which case *-ōki* occurs. Indefinite actor forms with SAP undergoers occur with the suffixes *-ōti* (1p) or *-ōkō* (else). 3"→3' configurations appear with *-ōk* (3"s) or *-ōkowa* (3"p), whereas 2→1 interactions take *-ōki*. Crucially, Blackfoot SAP passives take *-oko*. Unfortunately, Blackfoot is the most divergent of the known Algonquian languages, and its grammar is still rather poorly understood in some areas. I believe it safe to say that both the origin and the yield of such an *i* in the theme signs is such an area, so that its paradigms do not really help us understand Algonquian passives better.

Relational forms

Another paradigm I have not mentioned yet is the relational. These verb forms are found with AI and TI stems and "relate the action denoted by the stem to a person other than the agent in a way that is not specified; while some instances may be interpreted as benefactive, others are completely neutral" (Wolfart 1996: 404). These relationals take personal prefixes in the independent order and different suffix combinations in both orders, according to the person of the subject. The complete paradigm is given in (62), and an example in (63):

(62) PLAINS CREE RELATIONAL PARADIGM (adapted from Wolfart 1996:420)

	Independent	Conjunct	Person
a.	*ni-*…*-ā*$_2$*-n*$_5$	…*-ak*$_5$	1
b.	*ki-*…*-ā*$_2$*-n*$_5$	…*-at*$_5$	2
c.	Ø-…*-ē*$_2$*-w*$_5$	…*-ā*$_2$*-t*$_5$	3
d.	Ø-…*-ā*$_2$*-n*$_5$	...*-iht*	indefinite

(63) PLAINS CREE RELATIONAL FORM (Wolfart 1996:404)

Ki-miywēyihtamw-**ā**$_2$-**n**$_5$ kēsi-nēhiyawē-t$_5$?
2-like-DIR?-N thus:CNJ-speak.Cree-3
'Do you$_s$ like (with respect to him) the way he talks Cree?'

Although Wolfart does not break up the suffixes appearing on relational forms, I believe that some segmenting is not only possible but also useful. Forms with SAP arguments mark verbs as direct in both orders. Additionally, the subject person marking that would be expected appears as a prefix, but only the suffix *-n*, which corresponds to singular SAPs, appears after the direct morpheme. 3rd person forms are also direct and person-marked in both orders,

[40] Incidentally observe that these are among the examples used by DeLancey (1981b: 643f) to show that the local scenarios are to be treated separately from non-local and mixed ones. Pustet (1997) proposes the hierarchy 1 > 2 > 3 for Blackfoot based on similar data.

and there is an indefinite form with marking of its own in the conjunct order. In the independent order, indefinites behave like SAP forms.

4.2 Peeking over the clause boundary

The morphological evidence coming from paradigms presented in §4.1 seems to support an analysis like Frantz's (1966) and Goddard's (1979a), viz. with an underlying hierarchy of the type 2 > 1 > INDEF > 3prox > 3obv > 3anim, where INDEF stands for "indefinite actor", in which case agentless forms would be transitive. Those with SAP undergoers are marked accordingly, i.e. in the independent as inverse, in the conjunct with the corresponding theme suffixes, and forms with 3rd person undergoers would be direct.[41] In other words, rather than considering inverse forms passives, the traditional account is not incompatible with regarding passives as transitives.

Nevertheless, there are at least two problems with the agentless forms. First, the fact that the morphology of the forms hints at transitivity does not amount to proving their transitivity. It might well be the case that the forms were originally built from TA verbs with elements found in the TA paradigm, but the admittedly deviant morphemes (i.e., *-ikawi/-ekō/-igō* with SAPs and *-ā* with 3rd persons) might be detransitivizing suffixes. Both the exact etymology of these formants and their function in Proto-Algonquian are still unclear. The second issue is the behavior of such forms—in fact, of most forms discussed in this chapter—across the clause boundary, and this will be addressed in what follows for Cree and Ojibwa.

Dahlstrom (1986) on Plains Cree

Dahlstrom argued that Plains Cree morphosyntax can be adequately described with the notions of subject (S/A) and object (O) as follows:

(64) PLAINS CREE GRAMMATICAL RELATIONS (Dahlstrom 1986:ch3)

	A	O
a. Direct forms	$\text{subject}_{\text{prox}}$	$\text{object}_{\text{obv}}$
b. Inverse forms	$\text{subject}_{\text{obv}}$	$\text{object}_{\text{prox}}$
c. Passive forms	—	$\text{subject}_{\text{prox}}$

According to her analysis, both direct and inverse forms are transitive, and the

[41] The interested reader might want to check comprehensive descriptions of other Algonquian languages not discussed here, e.g. Menomini (Bloomfield 1962: ch8-10) and Delaware (Goddard 1979a: 167f). Apart from some language-specific idiosyncrasies, I found no problematic data there.

passive is intransitive. The difference between direct and inverse lies in the mapping of obviation status to the A/O and subject/object dimensions rather than in the linking of macroroles and grammatical relations. She presents four pieces of evidence for this claim: valence, the control of secondary predicates, a subjecthood test, and an objecthood test. I will discuss them in turn.

Both direct and inverse forms may in principle cooccur in a clause with up to three NPs unmarked for semantic case. At most two individual NPs are cross-referenced on the predicate, as we have seen, according to person, number, gender, and obviation. NPs not cross-referenced may be secondary objects, and personal morphology on the verb is anaphoric if it does not refer to any NP in the clause. By contrast, agentless forms may cooccur in a clause with maximally one unmarked NP with normal monotransitive predicates and two with ditransitives. While this suggests that inverse forms are in fact transitive, it does not necessarily mean that agentless forms are not, since the only possible co-reference with an actor would be with an indefinite NP, and it may well be the case that exactly this syntactic pattern is blocked by a morphology already expressing the indefinite actor and not tolerating a redundant NP.

Secondary predicates expressed on verbs like *niwāpiski-sisopēkah-ē-n wāskahikan* (white-paint-TR-1s house) 'I painted the house white' are said by Dahlstrom to require subjects for them to apply and objects to control them (1986: 209). But observe also Plains Cree causatives (characterized by a suffix *-h* that derives a causative stem):

(65) PLAINS CREE CAUSATIVES (Dahlstrom 1986:210f)

a. Nikamo-h-$\bar{e}_2$-w_5. (cf. AI *nikamo-*w_5 'he sings')
sing-CAUS-DIR-3
'He_{prox} makes him_{obv} sing.'[42]

b. Nit-ācimiso-h-$\bar{a}_2$-w_5.
1-tell.story.about.oneself-CAUS-DIR-3
'I made him tell a story about himself.'

c. Nit-ācimiso-h-ikw_2-w_5.
1-tell.story.about.oneself-CAUS-INV-3
'He made me tell a story about myself.'

Dahlstrom argues in an LFG framework that in all three cases, it is the object that performs the action expressed by the lexical verb, i.e. the singing or the storytelling, and therefore the inverse form in (c) has the same mapping as the direct one (b). Unfortunately, this brief excursus at the end of Dahlstrom's study

[42] The translation given by Dahlstrom is 'he makes them sing' (1986: 210).

addresses neither agentless forms nor further examples, so it is rather difficult to see whether these data unequivocally support her claim. With the reflexivized verb *ācim-iso-* 'tell a story about oneself', the S might simply be obligatorily coreferent with the O of the causative.

By far more revealing is Dahlstrom's subjecthood test, a construction she calls "copying to object". In this construction, the matrix TA verb inflects for an argument of the subordinate verb. The question is which combinations of S, A and O are possible—in other words, which is the pivot of the construction. Consider the data in (66):

(66) PLAINS CREE "COPYING TO OBJECT" I (Dahlstrom 1986:79f)

a_1. Ni-kiskēyim-ā$_2$-w$_5$ George ē-sākih-ā$_2$-t$_5$ o-kosis-a.
1-know-DIR-3 G. CNJ-love-DIR-3 3-son-OBV

a_2. *Ni-kiskēyim-im$_1$-ā$_2$-w$_5$-a$_7$ George ē-sākih-ā$_2$-t$_5$ o-kosis-a.
1-know-SDIR-DIR-3-OBV G. CNJ-love-DIR-3 3-son-OBV
Both: 'I know George$_{prox}$ loves his$_{prox}$ sons$_{obv}$.' (a_2 intended)

b_1. Ni-kiskēyim-im$_1$-ā$_2$-w$_5$-a$_7$ George ē-sākih-iko$_2$-t$_5$ o-kosis-a.
1-know-SDIR-DIR-3-OBV G. CNJ-love-INV-3 3-son-OBV

b_2. *Ni-kiskēyim-ā$_2$-w$_5$ George ē-sākih-iko$_2$-t$_5$ o-kosis-a.
1-know-DIR-3-OBV G. CNJ-love-INV-3 3-son-OBV
Both: 'I know his$_{prox}$ sons$_{obv}$ love George$_{prox}$.' (b_2 intended)

These examples show that, if the matrix verb *kiskēyim-* 'know (somebody)' cross-references one of the NPs of the subordinate clause, this NP has to be in A function in the latter; NPs in O function yield ungrammatical sentences. Crucially, agentless forms are allowed in subordination, suggesting that their argument is an S instead of an O:

(67) PLAINS CREE "COPYING TO OBJECT" II (Dahlstrom 1986:79f)

Ni-kiskēyim-ā$_2$-w$_5$-ak$_7$ ē-kī-sēkih-ih-t$_5$-ik$_7$.
1-know-DIR-3-3p CNJ-PT-frighten-INDEF.A/PASS-3-3p
'I know they were scared.'

These data support Dahlstrom's claim that the copy-to-object construction has an S/A pivot. Nevertheless, it does not follow from this that the A of an inverse is a subject.

What does Dahlstrom's last criterion, her objecthood test, say? Given that Plains Cree allows quantifiers to appear before the verb, the question now is which function must or can the discontinuous NP have in the clause. Consider the examples in (68) below. Example (a) shows the floating quantifier *kahkiyaw*

'all' modifying the noun *awāsisak* 'children' in S function with respect to the intransitive verb *pimipahtā-* 'run'. Examples (b) through (d) show that with direct and inverse verb forms, it is only the O that can be understood as modified by the floating quantifier, and not the A.

(68) PLAINS CREE FLOATING QUANTIFIERS I (Dahlstrom 1986:90f)

a. Kahkiyaw pimipahtā-w_5-ak_7 awāsis-ak.
all run-3-3p child-3pPROX
'All the children are running.'

b. Piyisk mihcēt nipah-$ē_2$-w_5-ak_7 ayahciyiniw-a.
finally many kill-DIR-3-3p Blackfoot-OBV
'At last they$_{prox}$ had killed many Blackfoot$_{obv}$.'

c. Nisto nipah-$ē_2$-w_5-ak_7 mōswa nāpēw-ak.
three kill-DIR-3-3p moose:OBV man-3pPROX
'The men killed three moose.'
Not: 'Three men killed moose.'

d. Kahkiyaw sākih-ikw$_2$-w_5-ak_7 o-tānis-iwāw-a iskwēw-ak.
all love-INV-3-3p 3-daughter-3p-OBV woman-3pPROX
'All women are loved by their daughters.'
Not: 'All their daughters love the women.'

Finally consider the agentless form in (69):

(69) PLAINS CREE FLOATING QUANTIFIERS II (Bloomfield 1934:86)

… mīna āsay mihcēt ē-nipah-in-t_5-ik_7 ayahciyiniw-ak.
also already many CNJ-kill-INDEF.A/PASS-3-3p Blackfoot-3pPROX
'…and that already many Blackfoot had been slain.'

Dahlstrom concludes that a pre-verbal quantifier separate from its head

> cannot be construed as modifying the subject of a transitive verb [….] The constraint on quantifiers is evidence for the patient argument of an inverse verb being the object of a transitive […] [but] the behavior of quantifiers with passive verbs is consistent both with the passive analysis given here, and with the analysis of these forms as transitive verbs with non-specific subjects.
>
> (Dahlstrom 1986: 99,104)

However, instead of postulating that the undergoers of inverse forms are objects, the syntactic constraint on quantifiers might be said to work ergatively,

with an S/O pivot. This is not a test for objects but a test for S's and O's, and therefore it is no surprise that agentless forms remain hidden behind an S/O mask.

Rhodes (1994) on Central Ojibwa

The reader may ask at this point why I am at such pains to avoid coming to Dahlstrom's conclusions as summarized in (64) above. The main reason is the evidence presented by Rhodes (1994) as to the four different patterns found in Central Ojibwa. These four pivots are shown in Figure III-4:

Figure III-4
CENTRAL OJIBWA PIVOTS

	Pivot I		Pivot II		Pivot III		Pivot IV	
direct	A	O	A	O	A	O	A	O
inverse	A	O	A	O	A	O	A	O
passive$_1$	—	O	—	O	—	O	—	O

adapted from Rhodes (1994)

Rhodes (1994) mentions Pivot IV only marginally and says it is the weakest attested pattern: "[transitive] [v]erbs with objects all show *-n(aa)* in the independent except where the patient of direct, agent of an inverse, or patient of a passive is animate" (p. 443). This pattern shall not be pursued further here.

Pivot I is strictly semantic: actors are treated alike, and differently from undergoers, irrespective of verb morphology. This pattern is observed with a subclass of preverbs like *bōni-* 'stop V-ing', *wēbi-/mājī-* 'start V-ing', and others. The examples in (70) show that only an A can control these preverbs, and since there is no A in (c), **ngībōnignōn'gō* 'they stopped talking to me' is ungrammatical—although "there is no clear way to test for the non-bindability of patient/recipient/themes in transitive clauses" (Rhodes 1994: 441).

(70) CENTRAL OJIBWA SEMANTIC ALIGNMENT (PIVOT I) (Rhodes 1994:441)

a. N-gī-bōni-ganōn-ā$_1$.
1-PT-stop-talk.to-DIR
'I stopped talking to him.'

b. N-gī-bōni-ganōn-igw$_1$-i$_2$.
1-PT-stop-talk.to-INV-ISA
'He stopped talking to me.'

c. *N-gī-bōni-ganōn-igw$_1$-i$_2$.
1-PT-stop-talk.to-INV-ISA
Intended: 'They stopped talking to me.'

Pivot II corresponds to Dahlstrom's proposal for Plains Cree, so it is

important to note in (71) that this pattern is found in Central Ojibwa with floating quantifiers (a-c). It also occurs with certain preverbs like *bi-* 'come and V' and *ni-* 'go and V', which pattern differently from *bōni-* 'stop' (d-f). Here, the actor of both direct and inverse verbs patterns like the undergoer / single argument of agentless forms.

(71) CENTRAL OJIBWA ACCUSATIVE ALIGNMENT (PIVOT II) (Rhodes 1994:441f)

Floating quantifiers

a. Nīž n-gī-nis-ā$_1$-nāni$_5$-ag$_9$ gīgōny-ag.
two 1-PT-kill-DIR-1p-3pANIM fish-pANIM
'We$_e$ caught two fish.' Not: '(The) two of us caught fish.'

b. Nīž n-gī-wābam-igw$_1$-nāni$_5$-ag$_9$ aniniw-ag.
two 1-PT-see-INV-1p-3pANIM man-pANIM
'The men saw two of us$_e$.' Not: 'Two (of the) men saw us$_e$.'

c. *Nīž n-gī-bāškizw-ā$_1$-w$_7$-ag$_9$ aniniw-ag.
two 1-PT-shoot-INDEF.A/PASS-3-3pANIM man-pANIM
Intended: 'Two (of the) men were shot.'

Preverbs

d. N-gī-bi-ganōn-ā$_1$.
1-PT-come-talk.to-DIR
'I came to talk to him.'

e. N-gī-bi-ganōn-igw$_1$-i$_2$.
1-PT-come-talk.to-INV-ISA
'He came to talk to me.'

f. N-gī-bi-ašam-igw$_1$-i$_2$.
1-PT-come-feed-INV-ISA
'I came to be fed.'

Nevertheless, that there is more to floating quantifiers can be seen from the following examples:

(72) CENTRAL OJIBWA QUANTIFIERS (Rhodes 1994:442, p.c.)

a. Nībina n-gī-wīsini.
much 1-PT-eat
'I ate a lot.'
Not: 'I ate a lot of it.'

b. Nībina gī-wīsini-w$_7$-ag$_9$.
much PT-eat-3-3pANIM
'They ate a lot.'
Not: 'A lot of them / people ate.'

In Rhodes's words, "intransitive verbs with implied objects can have their virtual object bound to certain general quantifiers in the floated [=preverbal, FZ] position" (1994: 442), as seen in (a)—which suggests a semantic basis for this binding. By the same token, (b) shows that only O's (and not S's) can launch these quantifiers—this may suggest, as it does to Rhodes, that these are rather

"some sort of adverbial[s] associated with the verb" (p.c.). I shall return to this latter issue shortly.

Interestingly enough, Rhodes finds many more constructions that pattern like Pivot III than like the other pivots just mentioned. Here, the undergoer of both inverse and agentless forms is treated like the actor of direct forms. The data consist of the ban on ergative inanimates (73), the control of clause internal obviation (74), word order (75), raising (76) and the control of obviation in adverbial adjunct clauses (77). I will deal with each in turn.

(73) CENTRAL OJIBWA BAN ON ERGATIVE INANIMATES (Rhodes 1994:433-434)

a_1.	*W-gī-mīgiškaw-$ā_1$-an_9	nJohn-an	mitigw.
	3A-PT-hit.the.mark-DIR-OBV	J.-OBV	tree
a_2.	W-gī-mīgiškaw-igw_1-an_9	mitigw-an	nJohn.
	3A-PT-hit.the.mark-INV-OBV	tree-OBV	J.

Both: 'The tree hit John.' (a_1 intended)

b_1.	*W-gī-mīgiškaw-igw_1-an_9	nJohn-an	mitigw.
	3A-PT-hit.the.mark-INV-OBV	J.-OBV	tree
b_2.	W-gī-mīgiškaw-$ā_1$-an_9	mitigw-an	nJohn.
	3A-PT-hit.the.mark-DIR-OBV	tree-OBV	J.

Both: 'John hit the tree.' (b_1 intended)

c_1.	*Gī-mīgiškaw-$ā_1$-w_7	mitigw.
	PT-hit.the.mark-DIR?-3	tree
c_2.	Gī-mīgišk-$igāzo_{1\text{-}2}$	mitigw.
	PT-hit.the.mark-$PASS_2$	tree

Both: 'The tree was hit.' (c_1 intended)

As these examples show, inanimate actors can cooccur only with inverse TA forms, and inanimate undergoers only with direct TA ones. As in the other Algonquian languages, there is a separate (sub-)paradigm for the case where inanimates act on animates in Ojibwa. Also observe that the agentless form is ungrammatical with an inanimate undergoer / single argument, since this form is built on a TA verb. To obtain a grammatical form, a $Passive_2$ is needed.

The second argument discussed by Rhodes is clause internal obviation: "Within a clause a third person animate obligatorily triggers the overt mark of disjoint reference known as the OBVIATIVE in another third person animate according to [Pivot III]" (Rhodes 1994: 435, emphasis in the original). He claims that undergoers of direct forms and actors of inverses can control the obviation of secondary objects only, and that actors of direct forms, undergoers of inverse verbs and single arguments of agentless forms control the obviation of all other actants. In (a) and (b) below, an obviative verbal suffix *-an* cross-

references the obviative argument, which is undergoer with the direct verb and actor with the inverse. But with the ditransitive verb *mīn-* 'give', the secondary object *asemā* 'tobacco' fails to trigger obviative *-an* on the verb in spite of its obviative status in direct, inverse, or agentless forms (c-e). Observe the anomalous monotransitive verb *dāwe-* 'sell' that takes secondary objects like ditransitives, in (f) occurring with obviative *-an*.

(74) CENTRAL OJIBWA CLAUSE INTERNAL OBVIATION (Rhodes 1994:435f)

a. W-gī-zāgih-ā$_1$-**an**$_9$ ni-mišōmis-an n-ōkomis.
3A-PT-love-DIR-OBV 1-grandfather-OBV 1-grandmother
'My grandmother$_{prox}$ loved my grandfather$_{obv}$.' [prox→obv, DIR]

b. W-gī-zāgih-igw$_1$-**an**$_9$ ni-mišōmis-an n-ōkomis.
3A-PT-love-INV-OBV 1-grandfather-OBV 1-grandmother
'My grandfather$_{obv}$ loved my grandmother$_{prox}$.' [obv→prox, INV]

c. N-gī-mīn-ā$_1$ asemā-an ni-mišōmis.
1-PT-give-DIR tobacco-OBV 1-grandfather
'I gave my grandfather tobacco.' [1→prox, SOobv, DIR]

d. N-gī-mīn-igw$_1$ asemā-an ni-mišōmis.
1-PT-give-INV tobacco-OBV 1-grandfather
'My grandfather gave me tobacco.' [prox→1, SOobv, INV]

e. Gī-mīn-ā$_1$-w$_7$ asemā-an ni-mišōmis.
PT-give-DIR?-3 tobacco-OBV 1-grandfather
'My grandfather was given tobacco.' [→prox, SOobv, PASS]

f. W-gī-dāwe-n-**an**$_9$ asemā-an ni-mišōmis.
3A-PT-sell-PEG-OBV tobacco-OBV 1-grandfather
'My grandfather sold tobacco.' [prox→, SOobv, DIR]

Ojibwa word order is related to definiteness, gender, and grammatical relations. A summary of both preferred and ungrammatical patterns with three overt definite lexical NPs and the (clause initial) verb *šam-* 'feed' is given in (75); other orders are possible but dispreferred:

(75) CENTRAL OJIBWA WORD ORDER PATTERNS (Rhodes 1994:438)

	direct clauses	inverse clauses
a. all three arguments animate		
preferred	AOE	EOA
ungrammatical	OAE	OEA

		direct clauses	inverse clauses
b. A and E animate, O inanimate			
	preferred	AOE	EOA
	ungrammatical	AEO	EAO

With animate E's, O-initial patterns are either strongly dispreferred or ungrammatical, while those word orders where A and E precede O are definitely bad grammar when the E is inanimate. These patterns show that direct and inverse clauses differ precisely in their treatment of A's and E's, suggesting that there might be a remapping taking place between the macroroles on the one hand and the syntactic functions subject and primary object on the other.

The last two constructions that follow Pivot III, viz. raising and obviation into adjunct clauses, are interesting on several grounds. First, the former is also addressed by Dahlstrom (1986) for Plains Cree. Second, there is considerably variation as to which Pivot both constructions actually follow, all combinations of Pivots II and III being possible. Consider the data below.

(76) CENTRAL OJIBWA RAISING (Rhodes 1994:439f)

a_1.	N-gikenim-$ā_1$-ag_9	[aniniw-ag	gī-bāškizw-$ā_1$-$wā_6$-d_7	Māgī-an].
	1-know-DIR-3p	man-pANIM	PT-shoot-DIR-3p-3	M.-OBV
	'I know that the men_{prox} shot $Marge_{obv}$.'			
a_2.	N-gikenim-$ā_1$	[Māgī	gī-bāškizw-igw_1-d_7	aniniw-an.]
	1-know-DIR	M.	PT-shoot-INV-3	man-OBV
	'I know that the men_{obv} shot $Marge_{prox}$.'			
a_3.	N-gikenim-$ā_1$	[gī-bāškizw-ind.]		
	1-know-DIR	PT-shoot-3:$PASS_1$		
	'I know that he_{prox} was shot.'			
b_1.	*N-gikenim-$ā_1$	[Māgī-an	gī-bāškizw-$ā_1$-$wā_6$-d_7	aniniw-ag.]
	1-know-DIR	M.-OBV	PT-shoot-DIR-3p-3	man-pANIM
	Intended: 'I know that the men_{prox} shot $Marge_{obv}$.'			
b_2.	*N-gikenim-$ā_1$-ag_9	[aniniw-an	gī-bāškizw-igw_1-d_7	Māgī.]
	1-know-DIR-3p	man-OBV	PT-shoot-INV-3	M.
	Intended: 'I know that the men_{obv} shot $Marge_{prox}$.'			

These examples show that not all arguments of a subordinate clause can be encoded on the predicate of the matrix clause. The (a)-sentences illustrate that this is possible with the A of a direct subordinate clause, the O of an inverse subordinate clause, and the "O" of a passive subordinate clause, respectively. The ungrammaticality of the (b)-sentences shows that the O of a direct

subordinate clause and the A of an inverse subordinate clause are not raisable.

Finally, observe in the following isolated sentences that some conjunct predicates optionally take the verbal obviative suffix *-ini* when the A of a direct clause, the O of an inverse clause, or the "O" of a passive clause is obviative, respectively. However, with O's of direct clauses and A's of inverse clauses this is impossible:

(77) CENTRAL OJIBWA OBVIATION INTO ADJUNCT CLAUSES (Rhodes 1994:440f)

a_1. Mīš nāgoši(-ini$_6$)-g$_7$ gī-šam-i$_1$-d$_7$.
then be.evening-OBV-3INAN PT-feed-1O-3ANIM
'Then, in the evening, he fed me.'

a_2. Mīš nāgoši(-ini$_6$)-g$_7$ o-gī-bizikaw-igw$_1$-an$_9$ dōpwi-n.
then be.evening-OBV-3INAN 3A-PT-strike-INV-OBV table-OBV
'Then, in the evening, the table$_{obv}$ fell on him.'

a_3. Mīš nāgoši(-ini$_6$)-g$_7$ gī-bāškizw-ā$_1$-w$_7$.
then be.evening-OBV-3INAN PT-shoot-DIR-3
'Then, in the evening, he was shot.'

b_1. *Mīš nāgoši-ini$_6$-g$_7$ n-gī-šam-ā$_1$.
then be.evening-OBV-3INAN 1-PT-feed-DIR
Intended: 'Then, in the evening, I fed him.'

b_2. *Mīš nāgoši-ini$_6$-g$_7$ n-gī-šam-igw$_1$.
then be.evening-OBV-3INAN 1-PT-feed-INV
Intended: 'Then, in the evening, he fed me.'

Algonquian pivots

Work by Manning (1996), already mentioned in Chapter I, suggests that while some constructions (control, binding, and addressee of imperatives) naturally pattern accusatively, others (raising, floating quantifiers, relativization, etc.) may have either an S/A or an S/O pivot, or be neutral. Let us consider Dahlstrom's (1986) and Rhodes's (1994) findings in this light in order to learn more about Algonquian morphosyntax.

With regard to preverbs like *bōni-* 'stop' and *wēbi-/mājī-* 'start', it is noteworthy but hardly surprising that only actors can control them in Central Ojibwa. Although one might have expected to find an S/A pivot here, there is arguably more than a scant semantic motivation underlying Pivot I if these preverbs are thought of as having a highly agentive controller; other preverbs like *bi-* 'come and V' and *ni-* 'go and V' apparently do not require this to be the case and therefore work accusatively.

The situation with Pivots II and III is more interesting, however. First, recall

that both raising and obviation in adjunct clauses can follow either pivot when the idiolects of several speakers are taken into account. But even if this were not the case, the data from Plains Cree and Central Ojibwa yield different results, as shown in Figure III-5 below. Four types of clauses have been distinguished, viz. normal or basic intransitive (itr), direct transitive (dir), inverse transitive (inv), and passive or derived intransitive (pass).

Figure III-5
ALGONQUIAN PIVOTS (SELECTION)

		Plains Cree		Central Ojibwa	
Raising	itr	S		S	
	dir	A	O	A	O
	inv	A	O	A	O
	pass	—	O	—	O
Quantifiers	itr	S		S	
	dir	A	O	A	O
	inv	A	O	A	O
	pass	—	O	—	O

In Manning's framework, both raising and floating quantifiers are gr-structure processes and may pattern accusatively, ergatively, or neutrally. Therefore, it is not necessarily odd that Plains Cree and Central Ojibwa have chosen different pivots. What is important here is that Plains Cree and Central Ojibwa differ as to whether they treat direct and inverse clauses alike. The fact that Central Ojibwa transitive clauses can be said to sometimes fall into two groups raises the question of the interaction between direction and syntactic alignment mentioned in Chapter II. Some processes that allegedly work with Pivot III and therefore treat the A of direct clauses and the O of inverse clauses as primary arguments (the ban on ergative inanimates, clause internal obviation and obviation into adjunct clauses) might be explained on a basis that is not exclusively syntactic but rather mixed, since gender and obviation play a crucial role.[43] Word order patterns are governed by several factors in addition to macrorole of the referents, and recall that many of the possible orders are dispreferred rather than blatantly ungrammatical—hardly a rigid syntactic restriction. Raising, albeit problematic because the speech of different speakers

[43] Rhodes argues that Central Ojibwa obviation is primarily syntactic, but he acknowledges that "[w]here there is syntactic choice, the realization of obviation dependes on the role the referents involved play in the text as a whole" (1990a: 109)—this is why I have chosen the term MIXED instead of "pragmatic-semantic" or the like.

shows different pivots (crucially including the S/A pivot of Plains Cree) leaves us with the legitimate but somewhat weakened question of how syntactic the difference between direct and inverse clauses really is.

5. Summary of Algonquian languages

This rather deconstructive survey of the morphosyntax of three Algonquian languages leaves us with a picture that is less neat than the textbook account: lexical ergativity, accusative marking of obviatives and neutral person marking but hierarchical access to marking slots are opposed to clear core, semantic and pragmatic direction and a perhaps independent local section—and if Rhodes is right about Central Ojibwa, direction is not expressed by individual morphemes but by the opposition between direct and inverse clauses (in his earlier proposal, the latter is a re-transitivized passive). Are we better off than when we started?

In my opinion, our understanding of Algonquian morphosyntax has deepened in a number of ways. First, though trivially, "the Algonquian inverse" is not particularly illuminating a label for systems that are, as we have seen, fairly heterogeneous. Even though there are many cognates involved and the systems work similarly, especially considering that overt nominal obviation is rarely found elsewhere in the world's languages, neither the yield of the cognate morphology nor the pivots targeted by individual constructions are the same in the three languages discussed. Lumping them together without acknowledging some relevant differences amounts to using terms like "Indo-European tense and aspect" or "Australian case": they might be useful as impressionistic first approximations but hardly meaningful as analytic tools.

Second, it is interesting to see the details in which the particular systems differ from each other. It appears from the diachronic evidence for Plains Cree that Proto-Algonquian originally showed a non-focal marking pattern in the conjunct where the markers *-*i* and *-*iti* encoded 1st and 2nd person undergoer, respectively. The individual languages have departed from this to different degrees and in different realms: Plains Cree restructured its paradigms so as to mirror the opposition between direct and inverse in the independent with plural SAPs, while Miami-Illinois and Central Ojibwa were rather conservative in this respect. The direction markers *-*ā* and *-*ekw* are probably best thought of as original non-focal 3rd person markers that have become low-focal in some languages—clearly in Plains Cree, perhaps clearly not in Central Ojibwa.

A further interesting difference is the way individual languages handle their indexability hierarchies. In particular, the categories of number and reference appear to interact in a complex way in Plains Cree and Miami-Illinois, whereas Central Ojibwa seems to disfavor polynomy with regard to marking slots. The

Algonquian person hierarchy 2 > 1 > 3 is, as we have seen, at best an over-simplification and at worst an urban legend. Dominant though that particular hierarchy seems to be or have become in Central Ojibwa, the other two languages show that it is basically prefixes that work that way, with some suffixes functioning on a different logic.

This last issue leads to the question of the exact status of local scenarios. Rhodes's syntactic account of Central Ojibwa integrates local scenarios into the hierarchically determined voice alternation, but it does so at the cost of postulating somewhat odd allomorphies. The conjunct non-focal local markers have become specialized in the independent in Plains Cree and Miami-Illinois, but this fact alone does not align them together with the direct versus inverse opposition. If we take the languages' tolerance for polynomy seriously, DeLancey's (1981a, 1981b) and Hockett's (1966, 1993) suggestion, viz. that the local scenarios are orthogonal to the mixed and non-local ones, appears to be more plausible than Wolfart's (1973, 1996) and Fabri's (1996) view that the hierarchy determining access to the prefix slot governs direction as well. More precisely, I fail to see any syntactic and certainly any morphological evidence that shows clearly that the local domain has been aligned with the other two in Plains Cree and Miami-Illinois.

I must disappoint those readers expecting a conclusive remark on the inverse-as-passive analysis here. To my mind, Rhodes's account would be more convincing if it were not for the unsolved problem of the phantom -i_2 in Central Ojibwa and the morphophonemics of passive / agentless forms in general.[44] It is probably safe to say that we still do not know exactly what kind of constructions those agentless forms are and how they came about. By the same token, the quest for pivots is frustrating if one is expecting clear answers along the lines of either a simple accusative syntax or a more principled mixed pivot framework like Manning's (1996).

Further research shall confirm or disprove what seems to me to be the central claim arising from the analyses discussed in this chapter, viz. that grammatical relations are somewhat erratic in Algonquian. By this I understand that although syntactic functions can be found, whatever internal forces the present-day tongues inherited from the proto-language have been successful in neither consistently forcing them to generalize one or two given pivots nor re-organizing their morphology accordingly (as they might well have done under the influence of a language obsessed with the S/A pivot like English). Obviative referents work accusatively in Plains Cree—presumably a reflex of Mithun & Chafe's (1999) starting point notion. Stems are derived from roots following an

[44] Rhodes's more recent analysis might well be on the right track (cf. footnote 39 in this chapter, p. 120). As to the morphophonemics of Central Ojibwa, I can only follow the opinion of the specialists here.

ergative principle—plausibly, a response to the principle of immediacy of involvement. Person and number of arguments are marked following hierarchies that may eventually tend to a unified 2 > 1 > 3' > 3" ranking, which in turn might inform one of the fundamental categories behind the "formidable paradigms": direction. It seems to be the case that direction originated from non-focal undergoer markers that became low-focal and more or less generalized. How syntacticized this category has become, or how syntactic it already was, if Rhodes's underlying representation of inverse forms turns out to be supported by further reconstructive work, is a fascinating matter to be settled by future research.

Chapter IV
Kutenai*

> A black storm-cloud of pain shrouded [Achilles][1]
> — *Iliad* XVIII, 22

Readers acquainted with old texts like this are familiar with how casually Indo-European portrays personified entities or inanimates acting upon animates or human beings. In the passage quoted above, the undergoer is actually a 3rd person demonstrative but the context shows that it must be coreferential with Achilles, probably one of the most indefatigably proximate characters ever. To be sure, Kutenai (one of those strangely fascinating languages whose genetic affiliation is still obscure) is unlike Algonquian in that it does not show a formal opposition between cases where SAPs act upon 3rd persons and those where it is the other way round. The verse describing the Greek hero's mourning for his friend, however, would be translated into the language by means of an inverse clause where not only verbal morphology but also nominal marking would strikingly resemble Algonquian patterns—in fact, areal contact with Algonquian and Salishan may provide a plausible explanation for a good deal of the shared structures. A number of these interesting similarities and some differences between Kutenai and Algonquian systems shall concern us in the present chapter.

1. Kutenai direction

Kutenai is a basically agglutinative language with a number of verbal and/or nominal prefixes and suffixes that mark possession, person, number, tense, aspect, and mood, among others. I shall concentrate in what follows on verbal morphology, but some references to pertinent nominal marking will be made as

* This language, also known as Ktunaxa, Kootenai or Kootenay, is spoken by an uncertain but small number of people (200 according to the Ethnologue, perhaps some dozens according to Mithun 1999) in southeastern British Columbia and adjacent areas of Idaho and Montana. Cf. Campbell (1997: 118f) and Mithun (1999: 452f) for more details.

[1] Original: τὸν δ'ἄχεος νεφέλη ἐκάλυψε μέλαινα tòn d'ácheos nephélē ekálypse mélaina.

well. After a brief introduction to the relevant Kutenai verb morphology (§1.1), I will address the questions of non-local direction (§1.2), obviative subjects (§1.3), and core direction (§1.4).

1.1 Essentials of Kutenai verb morphology

Note that a frequent allomorphy rule is *n*V~V at the beginning of some suffixes (like *-nała'~-ała'* for 1pA and *-ni~-i* for indicative). The basic personal morphology on verbs is given in Table IV-1:

Table IV-1
KUTENAI PERSONAL MORPHOLOGY

O \ A	1s	1p	2s	2p	3
1s			hin= -ap	hin= -ap-kił	-ap
1p				hin= -awas[2]	-awas
2s	hu= -is	hu= -awas			-is
2p	hu= -is-kił				-is-kił
3	hu=	hu= -ała'	hin=	hin= -kił	Ø/-aps/-aps-(i)s
itr.	hu=	hu= -ała'	hin=	hin= -kił	-Ø

adapted from Dryer (1991)

The proclitics encode 1S/A (*hu=*) and 2S/A (*hin=*). Some of the suffixes are fairly transparent, like *-ap* '1O' and *-is* '2O', but others show a somewhat aberrant distribution. Whereas *-kił* basically appears to mean 2nd person plural, it is missing in the 2p→1p configuration. Similarly, *-ała'* encodes '1pS/A' and *-awas* basically means '1pO' but the latter occurs with the 1p→2 interaction as well. The suffixes appearing in the non-local scenarios, viz. *-aps* and *-(i)s*, shall be explained further down.

Before turning to examples of clauses where these person markers appear, let me briefly comment on the conditions allowing their cooccurrence. Clearly, *-ap* '1O' and *-is* '2O' are the only suffixes that may cooccur with *-kił* '2p', and the latter suffix is the only one that can cooccur with the former two. Both *-ała'* '1pS/A' and *-awas* '1pO' preclude the verb from taking any other SAP marker. Such a distribution cannot be explained by simply postulating one slot where the mutually exclusive *-ap*, *-is*, *-ała'* and *-awas* occur and a second slot occupied by *-kił*, since this does not account for *-awas* superseding *-kił*

[2] The paradigm in Canestrelli (1927: 33) differs from the forms given here: instead of a 2→1p form *hin=...-awas*, a 2p→1 form *hin=...-ap-kił* is found. Neither Matthew Dryer (p.c.) nor I have an explanation for this discrepancy.

where they would be expected to cooccur (i.e. the 1p↔2p configurations). An alternative explanation might posit a hierarchy of the type 1p > 2p/sSAP governing the access to both suffix slots in the sense that whenever an argument is 1st person plural it will become marked irrespective of actual role and overall actant configuration, but such an account fails to provide a rationale for marking the 1p→2 interactions with a 1O marker. Assuming that *-awas* encodes only reference and not role (i.e., that it is a mere '1p' marker) leaves us with the unsatisfactory residue of *-ała'* characterized as both '1pS' and '1pA' with 3rd person O's.

It is hardly surprising that the aberrant cases are found in the local scenarios. A form like *hin=wūkat-awas-ni* 'you$_{s/p}$ saw us' should cover only the 2s→1p configuration, whereas *hu=wūkat-awas-ni* 'we saw you$_{s/p}$' does not contain any 2nd person marker and looks reflexive—true Kutenai reflexives, however, require the marking *-k*, see Garvin (1948, 1958). A similar distribution is found in Mapudungun (Chapter VII), where reflexive 1st plural forms can be actually said to cover the extended 1→2 scenarios. The distribution of the personal markers in local scenarios is most probably yet another example of Heath's (1991, 1998) pragmatically conditioned "anomalies".

First consider some intransitive examples:

(1) KUTENAI INTRANSITIVE CLAUSES (Dryer 1991:187f)

a. **Hu**=¢xa-ni.
1S/A=talk-IND
'I talked.'

Hu=¢xa-**nała'**-ni.
1S/A=talk-1pS/A-IND
'We talked.'

b. **Hin**=¢xa-ni.
2S/A=talk-IND
'You$_s$ talked.'

Hin=¢xa-**kił**-ni.
2S/A=talk-2p-IND
'You$_p$ talked.'

c. **Ø**=¢xa-ni.
3=talk-IND
'He / they talked.'

Observe that 3rd person is unmarked and unspecified for number in both intransitive and transitive clauses. The mixed scenarios are exemplified in (2):

(2) KUTENAI MIXED SCENARIOS (Dryer 1991:187f)

a. **Hu**=wūkat-i.
1S/A=see-IND
'I saw him / them.'

Wūkat-**ap**-ni.
see-1sO-IND
'He / they saw me.'

b. **Hu**=wūkat-**ała'**-ni.	Wūkat-**awas**-ni.
1S/A=see-1pS/A-IND	see-1pO-IND
'We saw him / them.'	'He / they saw us.'
c. **Hin**=wūkat-i.	Wūkat-**is**-ni.
2S/A=see-IND	see-2O-IND
'You$_s$ saw him / them.'	'He / they saw you$_s$.'
d. **Hin**=wūkat-**kił**-ni.	Wūkat-**is**-**kił**-ni.
2S/A=see-2p-IND	see-2O-2p-IND
'You$_p$ saw him / them.'	'He / they saw you$_p$.'

Finally consider the local scenarios in (3) that include the deviant marker combinations discussed above:

(3) KUTENAI LOCAL SCENARIOS (Dryer 1991:188f)

a. **Hu**=wūkat-**is**-ni.	**Hin**=wūkat-**ap**-ni.
1S/A=see-2O-IND	2S/A=see-1sO-IND
'I saw you$_s$.'	'You$_s$ saw me.'
b. **Hu**=wūkat-**is**-**kił**-ni.	**Hin**=wūkat-**ap**-**kił**-ni.
1S/A=see-2O-2p-IND	2S/A=see-1sO-2p-IND
'I saw you$_p$.'	'You$_p$ saw me.'
c. **Hu**=wūkat-**awas**-ni.	**Hin**=wūkat-**awas**-ni.
1s/A=see-1pO-IND	2S/A=see-1pO-IND
'We saw you$_{s/p}$.'	'You$_{s/p}$ saw us.'

1.2 Kutenai non-local direction

Let us now turn to what is more important for our present purposes, viz. the non-local scenarios in (4). Basically, 3↔3 interactions can be rendered in two ways in Kutenai: by means of unmarked direct clauses (a) or via inverse ones (b), where verbs appear marked with the suffix *-aps*.

(4) KUTENAI NON-LOCAL SCENARIOS I (Dryer 1991:189)

a. Wūkat-i.	b. Wūkat-**aps**-i.
see-IND	see-INV-IND
'He$_{prox}$ saw him$_{obv}$.'	'He$_{obv}$ saw him$_{prox}$.'

The clauses in (4) represent complete sentences, but it is possible to find the same opposition with clauses showing one or two lexical NPs, as shown in (5). Obviative NPs are marked with the obviative suffix *-s* and proximate NPs are

unmarked. Note that the strongly preferred but apparently not absolutely obligatory interpretation in (a) is that the only overt NP is coreferential with the O in direct clauses and with the A in inverse ones (Dryer 1991: 190):

(5) KUTENAI NON-LOCAL SCENARIOS II (Dryer 1991:185,190)

a.	Wūkat-i Małí-**s**.	Wūkat-**aps**-i Małí-**s**.
	see-IND M.-OBV	see-INV-IND M.-OBV
	‘He$_{prox}$ saw Mary$_{obv}$.’	‘Mary$_{obv}$ saw him$_{prox}$.’
b.	Wūkat-i pałkiy-**s** titqat’.	Wūkat-**aps**-i titqat’-**s** pałkiy.
	see-IND woman-OBV man	see-INV-IND man-OBV woman
	‘The man$_{prox}$ saw the woman$_{obv}$.’	‘The man$_{obv}$ saw the woman$_{prox}$.’

Before dealing with the conditions governing obviation status, it is important to observe that Kutenai has a passive construction that differs from inverse ones. Passives are available for all persons, as shown in (6), and simply consist of S/A personal marking and a suffix *-ił*.

(6) KUTENAI PASSIVE

Hu=wūkat-**ił**-ni.	Hin=wūkat-**ił**-ni.	Wūkat-**ił**-ni.
1s/A=see-PASS-IND	2S/A=see-PASS-IND	see-PASS-IND
‘I was seen.’	‘You$_s$ were seen.’	‘He was seen.’

Since 3rd person actants are basically unmarked, it cannot be seen from the morphology that passives are detransitive and inverse clauses are transitive. However, the actor of inverse verbs with only one or no overt NP in the clause is invariably understood as anaphoric, while the actor of passivized verb forms is interpreted as indefinite and unspecified (Dryer 1991: 199f). Dryer (1994) studies in detail the properties of direct, inverse, and passive clauses along the lines of Givón (1994). As expected, the passive is syntactically and semantically demoting while the inverse is O-topicalizing but probably still a transitive construction where the A retains a good deal of topicality. Moreover, there is an indefinite S form used with intransitives that stands in opposition to the passive:

(7) KUTENAI INDEFINITE S (Dryer 1994:69f)

a. Taxa-s ’at qaky-**am**-ni ’in ’at n-uł
then-OBV IPFV say-INDEF.S-IND that IPFV PRED-COMPL
qanałunis-**nam**-ni.
travel-INDEF.S-IND
‘They say people used to travel that way.’

b. K-qaki k-ł=¢inax-**am**-is=¢
SUB-say SUB-IRR=go-INDEF.S-OBV.S=and
k-ł=qak-ił-**ł**-is …
SUB-IRR=say-TR-PASS-OBV.S
'[Turtle]$_{prox}$ said that someone$_{obv}$ should go and tell [Frog]$_{obv}$ that…'

While the *ił*-construction occurs with transitive verbs (in (b), the verb has been transitivized by means of a transitivizing suffix *-ił*), *-am* is restricted to intransitive predicates (Dryer 1994: 70). In (a), *-am* is rendered in English by either 'they' or 'people', and it is translated as 'someone' in (b)—invariably, an indefinite and unspecified S.

As in Algonquian, one of the factors explaining the assignment of obviative status is possession. Possessed NPs are always obviative if the possessor is 3rd person, but they are unmarked unless the possessor himself is also obviative:

(8) KUTENAI POSSESSION OBVIATION (Dryer 1991:194)

a. Małí wūkat-i xa'ł¢in-**s**.
M. see-IND dog-OBV
'Mary$_{prox}$ saw a dog$_{obv}$.'

b. Małí wūkat-i xał¢in-**'is**.
M. see-IND dog-3POSS
'Mary$^{i}_{prox}$ saw her$^{i}_{prox}$ dog$^{j}_{obv}$.'

c. Misáł wūkat-i xał¢in-**'is-s**.
M. see-IND dog-3POSS-OBV
'Michael$^{i}_{prox}$ saw her$^{j}_{obv}$ dog$^{k}_{obv}$.'

In (a), *xa'ł¢in* 'dog' is obviative due to semantic considerations, as we shall see shortly, and in (b) it is obligatorily obviative because the possessor is a 3rd person, and it takes the 3rd person possessive suffix *-'is*. Only when the possessor is obviative (c) is the obviative marked with the obviative suffix *-s*. This leads Dryer to state that possessed nouns are not inflected for their own obviativeness but for their possessors' (Dryer 1991: 195).

In the absence of such a possessive dependency, it is possible to assign different obviation statuses to different 3rd persons due to discourse factors. A case in point is shown in (9) below. At the beginning of a narrative the salient actant is Chickadee, and so a clause like (a), where Wolf acts on him, is inverse. In a later portion of the discourse, however, Wolf becomes the more prominent participant and therefore the clause in (b), where he acts upon a further 3rd person, is direct.

(9) KUTENAI DISCOURSE OBVIATION (Dryer 1992:156)

a. N-ułpał-naps-i kākin-s=¢ …
PRED-hear-INV-IND Wolf-OBV=and
'Wolf$_{obv}$ heard him$_{prox}$ and …'

b. Taxa-s n-'umi¢i't-i ni'-s kiłq'ałłi(')-s=¢ …
then-OBV PRED-butcher-IND ART:OBV elk-OBV=and
'Then [Wolf]$_{prox}$ butchered the elk$_{obv}$ and …'

The conditions under which such a proximate shift occurs are discussed in length in Dryer (1992: 139f, 1994), and the interested reader is referred to those studies in addition to Dryer (1998) for more details.

Finally, it is important to observe that semantic considerations also play a role with regard to obviation status. Given two actants, the lower one on the hierarchy human > non-human animate > inanimate will always be obviative. This explains why, even outside of any discourse context, a sentence like (a) is odd, and normally only (b) can be used in order to depict the particular state of affairs in (10).[3] Note that it is not the opposition direct versus inverse but the assignment of proximate versus obviative that is governed by the animacy hierarchy.

(10) KUTENAI SEMANTIC OBVIATION (Dryer 1992:125)

a. ??Xa'ł¢in n-'it'x-ni pałkiy-s.
dog PRED-bite-IND woman-OBV

b. Pałkiy n-'it'x-naps-i xa'ł¢in-s.
woman PRED-bite-INV-IND dog-OBV

Both (a intended): 'A dog bit a woman.'

1.3 Obviative subject *-s*

Up to this point, all examples illustrating interactions between proximates and obviatives have been unmarked for person, the only possible actional suffix being inverse *-aps* in inverse clauses. Especially interesting is the fact that an obviative actant in S/A function may trigger an obviative marking *-s* on the verb. In (11), *ławu* 'cow elk' is obviative in the particular portion of discourse from which (a) is taken. The sentence in (b) is one of the very infrequent double obviative clauses where both A and O are obviative.

[3] Dryer (1994: 88) says that this is a matter of strong preference rather than strict ban on deviant clauses.

(11) KUTENAI OBVIATIVE SUBJECT I (Dryer 1992:129f)

a. Qu-s łiyni-s qaqap-**s**-i ławu-s.
there-OBV across-OBV be-OBV.Subj-IND cow.elk-OBV
'Across there was a herd of cow elk$_{obv}$.'

b. Ma-'is Misáł wūkat-aps-**is**-ni Małí-s.
mother-3POSS M. see-INV-OBV.Subj-IND M.-OBV
'Mary$_{obv}$ saw Michael's$_{prox}$ mother$_{obv}$.'

In addition, the obviative subject suffix *-s* also occurs in subordinate clauses to mark disjoint reference with the subject of the matrix clause:

(12) KUTENAI OBVIATIVE SUBJECT II (Dryer 1991:193)

a. Qaki'-ni k-'uma¢.
say-IND SUB-laugh
'He$^{i}_{prox}$ said that he$^{i}_{prox}$ laughed.'

b. Qaki'-ni k-'uma¢-**s** ni'-s pałkiy-s.
say-IND SUB-laugh-OBV.Subj ART-OBV woman-OBV
'He$^{i}_{prox}$ said that the woman$^{j}_{obv}$ laughed.'

c. Taxa-s qaki'-ni nasu'kin k-¢xał-mitxa-ł-**is**.
then-OBV say-IND chief SUB-FUT-shoot-PASS-OBV.Subj
'Then the chief$^{i}_{prox}$ said that it$^{j}_{obv}$ was to be shot.'

In (a) the same actant is subject in both the matrix and the subordinate clause, so no special marking is required on any of the verbs. By contrast, in (b) the subject of the subordinate clause is the obviative *pałkiy* 'woman', and therefore the obviative subject suffix appears on the subordinate verb.[4]

Example (11b) above shows that inverse *-aps* and obviative subject *-s* may cooccur on a verb form, so the question is why this suffix does not appear on inverse forms where obviatives act upon proximates. This issue is related to the question of syntactic functions—which have been implicitly used hitherto, e.g. when calling the S/A pivot subject. In particular, it has not been explained in detail why the label "obviative subject" for the verbal suffix *-s* might be adequate at all. Consider the following examples:

[4] Dryer (1992: 148) comments on the fundamental differences between such a phenomenon and the fourth person of Eskimo languages (cf. Hewson 1991). Direction marking and obviation *allow* some reference tracking, but their primary purpose is a different one.

(13) KUTENAI OBVIATIVE SUBJECT III (Dryer 1996:25)

a. Wūkat-i pałkiy titqat'-s.
see-IND woman man-OBV
'The woman$_{prox}$ saw the man$_{obv}$.'

b. Wūkat-**s**-i pałkiy-s titqat'-s.
see-OBV.Subj-IND woman-OBV man-OBV
'The woman$_{obv}$ saw the man$_{obv}$.'

In (a) no *-s* is expected, since the verb is a direct form like the one given in (4). Once both actants are obviative, like in (b), the verb is marked—it is apparently the obviative A that triggers it. But in inverse clauses, *-s* appears on the verb when the undergoer is obviative:

(14) KUTENAI OBVIATIVE SUBJECTS IV (Dryer 1996:27)

a. Wūkat-aps-i pałkiy-s.
see-INV-IND woman-OBV
'A woman$_{obv}$ saw him$_{prox}$.'

b. Wūkat-aps-**is**-ni[5] pałkiy-s.
see-INV-OBV.Subj-IND woman-OBV
'A woman$_{obv}$ saw him$_{obv}$.'

From the data presented so far we can conclude that the morphological primary argument is the S with intransitives (also with derived intransitives like passives), the A in direct clauses (including non-local, mixed, and local scenarios) and the O in inverse clauses (logically only in non-local scenarios). SAP primary arguments are marked for person via the proclitics, and for number and person by means of suffixes; 3rd persons are unmarked, unless they are obviative, in which case they take the obviative subject suffix. In contrast to this, the question of secondary arguments is by far more elusive, and even Dryer (1996: 28) avoids being conclusive on the exact status of the A in inverse clauses. Unfortunately, neither the data nor the language descriptions available allow me to say much about behavioral properties of candidates to syntactic functions.

[5] Observe Dryer's (1991) mention of Morgan's (1991) bimorphemic analysis of *-aps*: the formant would consist of inverse *-ap* (more accurately, a higher ranking object morpheme) and obviative subject *-s*. The former author convincingly argues that an account of *-ap-s-is* is less satisfactory than the simpler one in terms of *-aps-is*. Cf. Dryer (1991: 197) for more details.

1.4 A frustrated search for core direction in Kutenai

Since the goal of the present study is not only to review well-known features of the languages subject to examination but also to cast a different light on some particular constructions that might have been analyzed differently in the past with a view to helping us understand direction better, a note on some constructions not addressed hitherto is in due order before proceeding to a general overview of Kutenai direction. For this purpose, I will take a brief look at possession and at the suffix *-mił* in order to tentatively answer the question of core direction in the language.

Kutenai possession

Possession is marked on head nominals by means of (i) the suffixes *-is* for 2nd person, *-'is* for 3rd person, and *-am* for indefinite possessors, and (ii) the prefix *ka-* for 1st person, as summarized in (15). Note the identity of two of the suffixes (*-is* and *-am*) with some personal markers discussed in Section 1. Further examples of possessed nominals are given in (16).

(15) KUTENAI POSSESSIVE MORPHOLOGY

a.	*ka-* 1POSS	b.	*-is* 2POSS
c.	*-'is* 3POSS	d.	*-am* INDEF.POSS

(16) KUTENAI POSSESSIVES (Dryer 1994:72, 1992:136)

a. K-łaxam-mał ʼałaqałt-**'is**=¢ …
SUB-arrive-COMIT child-3POSS=and
'When he$^{i}_{prox}$ got there with his$^{i}_{prox}$ children$_{obv}$, …'

b. Ni'-s pik'ak-s k-sawsaqa **ka**-titi …
ART-OBV long.ago-OBV SUB-live 1POSS-grandmother
'Long ago, when my grandmother was still alive, …'

Kutenai *-mił*

One of the many suffixes that have not been addressed up to this point is *-mił*. Dryer (1992: 138) explicitly says that further research is needed in order to ascertain the functional yield of this morpheme, and I have not been able to carry out any tests (nor have I had access to Boas's texts). Nevertheless, even the few examples found in the literature and the different characterizations given to *-mił* suggest that some hypotheses are better than others.

Garvin (1948) propounds the label "obviative for first and second person" without much explanation as to what this could mean, but it is clear that he

views *-mił* as a counterpart of *-s*, the obviative suffix used for 3rd persons. He gives six examples where *-mił* occurs suffixed to finite verbs (1948: 178), most of which are intransitive (e.g. 'I'll be sleeping'), but including two imperatives: *'ałqana'nt-ap-mił-e·n*[6] 'take$_s$ me across!' and *'akakin-mił-kił* 'take$_p$ them out!' It obligatorily cooccurs with one of the SAP S/A proclitics *hu=* or *hin=*, but the suffixes *-(e·)n~-m* '2s imperative' and *-kił* '2p imperative' may also cooccur with *-mił*. It cannot cooccur, on the contrary, with indefinite S *-am*, inverse *-aps*, reciprocal *-am* (Garvin's "mutual") or reflexive *-k* (but note that, intriguingly, *-mił* is said to be able to cooccur with 1pA *-ała* only if the verb form is passive). In addition, Garvin gives fives examples where *-mił* appears suffixed to nouns that take possessive *ka-* or *-is*.

Unfortunately, Garvin's (1948) examples are not commented on in detail—nor are his nominal examples supplemented with information about the context or the clauses from which they are taken, so little can be said that is not speculative. Apart from the imperative examples, which may require a separate treatment, it appears that only clauses in, roughly, mixed scenarios take either verbal or nominal *-mił*, and that possession and/or obviation play a role. The following are examples from Dryer (1992):

(17) KUTENAI *-mił* I (Dryer 1992:137)

a. Hu=wūkat-**mił**-ni xałɬin-'is.
1S/A=see-MIŁ-IND dog-3POSS
'I saw his$_{prox}$ dog$_{obv}$.'

b. Asł 'up-ił-ni titu-nis-**mił**.
PART die-TR-IND father-2POSS-MIŁ
'He$_{prox}$ just killed your$_s$ father$_{obv}$.'

In fact, Garvin (1948) follows Canestrelli (1927) in the parallel treatment given to *-mił* and *-(i)s*, at least terminologically. The latter author calls the obviative "secondary form" of the noun, and sets up two verbal paradigms for both intransitives and transitives, viz. "ordinary forms" (zero-marked) and "secondary forms" (*mił*-marked). Boas (1927) is more explicit and presents the paradigm given in Table IV-2 below.[7]

[6] I have retained the orthographies that deviate from Dryer's in the examples taken from other sources.

[7] In order to facilitate the reading of Boas's examples, I have retained his orthography in Table IV-2. Note the following correspondences to the morphology already discussed: *-mił* ~ *-meił* or *-mił*; 3POSS *-'is* ~ *-eis*; OBV *-(i)s* ~ *-e·s*; 2p *-kił* ~ *-kił*.

Table IV-2
-miɬ IN "MIXED SCENARIOS"

	3→3(x)	x→3(3)	
	Nominal	Nominal	Verbal
1s, 3	ka-…-meiɬ	…-eis	hu= …-mɯɬ
1p, 3	ka-…-ała.ɪs	…-eis	hu= …-ała.ɪs
2s, 3	…-ɪs-mɯɬ	…-eis	hin= …-mɯɬ
2p, 3	…-ɪs-mɯɬ-kɯɬ	…-eis	hin= …-mɯɬ-kɯɬ
3^{i}_{prox}, 3^{i}_{obv}	…-eis	…-eis	Ø
3^{i}_{prox}, 3^{j}_{obv}	…-ɪs-e·s	…-ɪs-e·s	Ø

adapted from Boas (1927: 94)

The left-hand column in Table IV-2 shows the nominal marking that occurs when a 3rd person acts on a further 3rd person possessed by the referent X. Observe that when this latter referent is an SAP, *-miɬ* appears on the nominal (except in the 1p case, as noted above). Consider one of Boas's five examples:

(18) KUTENAI NOMINAL *-miɬ* (Boas 1927:95)

Tkaẋa´'m-ne· ka-akɪt.ła´'-**meiɬ**.
enter-IND 1POSS-tent-MIŁ
'He$_{prox}$ entered my tent.'

The right-hand column in Table IV-2 shows both the nominal and the verbal marking appearing when the actant X acts upon a 3rd person possessed by another 3rd person. When the former actant is an SAP (except 1p), *-miɬ* occurs on the verb. Again Boas gives five examples of these constructions.

(19) KUTENAI VERBAL *-miɬ* (Boas 1927:96)

Hu=t'ɪ´ki-**meiɬ** aa'kaqɬɯ´-e·s.
1S/A=let.me.eat-MIŁ eye-3POSS
'Let me eat his eyes.'

Before postulating a core direction pattern based upon data like these, however, it is important to note that *-miɬ* also occurs in subordinate clauses. Recall Example (12), where we saw that the obviative subject suffix on an embedded verb form marked disjoint reference with the subject. Somewhat surprisingly, when the subject of the subordinate clause is an SAP, the embedded verb takes *-miɬ*:

(20) KUTENAI *-mił* IN SUBORDINATION (Dryer 1992:138, Boas 1927:96)

a. Qaki'-ni k-u='uma¢-**mił**.
say-IND SUB-1S/A=laugh-MIŁ
'He said that I laughed.'

b. Qake´i-ne· k-ɯn-ɬ='upa-**me´ɬ**-keił.
say-IND SUB-2S/A-IRR=go.ashore-MIŁ-2p
'He says you$_p$ should go ashore.'

c. Hu=tsx̣ał-'ako·-k^{u}ɯn-**mɯ´ɬ**-ne· ke´i-tsx̣a.
1S/A=FUT-hit-with.hand-MIŁ-IND SUB-say
'I should take it, said he.'

While in cases where the subject of the matrix verb is an SAP and the subject in the subordinate clause *-mił* does not appear, in cases like the first two sentences in (20) it does. Direct speech may also occur *mił*-marked, as in (c).

Bearing in mind that Garvin (1948) labeled *-mił* SAP obviative, the question is, why should SAP subjects be marked as obviative in subordinate clauses, as (a) below clearly suggests (recall that nominal obviative marking appears when the possessor is obviative)? Although the data discussed so far—and, in fact, the overwhelming majority of the data found in the literature I consulted—might give the impression that in mixed matrix clauses the verb does not take *-mił* unless possession is involved, there are some cases that indicate that it is subordination and/or obviation that make the real difference. Crucially, in (c) *numunana* 'bead(s)' is not possessed by a 3rd person but its obviative status apparently does not fail to trigger *-mił* on the verb:

(21) KUTENAI *-mił* II (Garvin 1958:11)

a. … =c k-u-ɬ=amat-ikc-ała ka-a·ke·-nała'-**is** …
=and SUB-1S/A-IRR=give-BEN-1pA 1POSS-hand-1p-OBV
'we should lend them a hand' (lit. our hand)

b. Na-s=c k-u=qałwiy-**miɬ**: …
this-OBV=and SUB-1S/A=think-MIŁ
'Here's what I think:…'

c. Taxa-s ma-k-u='itkin-**miɬ** numunana-**s** …
then-OBV as-SUB-1S/A=make-MIŁ bead-OBV
'Then, as I was making beads, …'

Seldom is something as clear in descriptive studies as the need for further research in order to clarify the function(s) of Kutenai *-mił*. The fact that verbs show this suffix with SAP→obv configurations suggests that it might be viewed

as a strong core direct marker, but this certainly does not cover the other cases, viz. those where a 3rd person acts upon another 3rd person possessed by an SAP and those where it seems that clausal subordination is the decisive factor. Because of these considerations, and taking into account the fact that there is no asymmetry whatsoever between normal transitive clauses with SAP→3' interactions and those with 3'→SAP configurations, I believe it is at best misleading and at worst simply wrong to say that Kutenai displays core direction.

2. Summary

Functional aspects

The preceding outline of Kutenai morphosyntax showed that non-local direction cannot be neglected in a description of the language without seriously misrepresenting its structures—the suffix *-aps* is best thought of as a low-focal inverse marker. An indexability hierarchy human > non-human animate > inanimate governs the assignment of obviation status, but syntactic (possession) and discourse (saliency) factors also play a role.

While core direction appears to be absent, local direction might be said to be marginally present if we consider the skewed patterns with 1st person plural actants (*hu=...-aw*as '1p→2' and *hin=...-awas* '2→1p'). The suffixes *-ap* '1sO' and *-is* '2O' are simple non-focal direction markers, and it is not entirely clear what the best analysis of 1p *-awas* is.

Formal aspects

Since *-aps* appears to be correctly analyzed by the specialists as a verbal suffix and the marking on nominals reflects the related but different notion of obviation, Kutenai inverse direction is head-marked. Observe that both obviative marking and direction marking are stunningly isomorphic to the systems found in Algonquian, but the segmental means chosen do not appear to be mere loans. Although nominal and verbal obviative marking are almost as parallel in Kutenai as in Algonquian (albeit with different material, obviative *-s* apparently not being a direct import from Algonquian), direct is unmarked (unlike the Algonquian direct *-ā*) and the passive bears no recognizable relationship to the direction system (recall that some Algonquian forms looked suspiciously inverse while others were apparently direct). We do not know the origin of the inverse suffix *-aps*, but Kutenai seems to have worked on its own in order to build its non-local direction-marking strategies.

With regard to grammatical relations, SAP morphology invariably patterns accusatively: the proclitics *hu*= and *hin*= can be adequately described as 1S/A and 2S/A markers, respectively. In non-local domains, however, there are two kinds of transitive clauses: (i) direct ones, where the primary argument is the actor, i.e. the proximate NP, and (ii) inverse ones, where the primary argument is the undergoer, i.e. the obviative NP. Although 3rd person actants are basically unmarked on the predicate, obviative S's and A's in inverse clauses are marked by a verbal suffix *-s*.

Little can be said here about behavioral properties of Kutenai syntactic functions, but both the preceding considerations and the admittedly poorly understood behavior of the suffix *-mił* suggest a fundamental split between non-local, local, and mixed clauses that goes beyond direction. Whereas voice (in particular, the *ił*-passive for transitive verbs and the *am*-construction for intransitives) seems to be analyzable in quite traditional terms, alignment appears to be more problematic. Local and mixed scenarios would show three types of clauses (intransitive, transitive, and passive) while non-local scenarios arguably display four: intransitive, passive, transitive direct, and transitive inverse. Further research shall substantiate or disprove the claim that Algonquian influence introduced hierarchical alignment into the language.

Givón (2001) hypothesizes that non-local direction (more precisely: pragmatic direction) represents the origin of more full-fledged direction systems, and Kutenai is certainly no counter-example in this respect. In fact, it might be the case that both morphological and syntactic effects can become entrenched in a language without the need for direction to immediately spread to the mixed and local scenarios. To a certain extent, the plausibility of such a development questions the appropriateness of Fadden's (2000) continuum in that it is not self-evident why purely morphological direction in all domains ought to be considered stronger or weaker than morphosyntactic direction in only one of them.

Chapter V
Sahaptian languages*

> Mik-api was still bent over the limp body, praying in a language that Fools Crow had heard before in Mik-api's healing ceremonies. It was the language of the Black Paint People, who taught him his medicine.
> — James Welch, *Fools Crow*

Mik-api, a respected Blackfoot shaman at the time of the arrival of the first settlers of European descent to Montana and Idaho in Welch's novel, had to cross the Rockies in order to learn the ways of the higher beings in a language very different from his own. Roughly 150 years later, we will be crossing those awe-inspiring mountains on our westbound trip in order to learn some lessons that the Algonquian languages and Kutenai were not able to teach us (and not in order to claim that Blackfoot direction is a loan from Sahaptian). Although the language spoken by the Nez Perce (the Black Paint People) is not usually used to illustrate inverse languages, its western relative, Sahaptin, displays direction-marking patterns that differ from the ones we have discussed so far using a good deal of morphology that is present in Nez Perce as well. Not only does dependent marking play more important a role here than to the east of the Rockies but also head marking exhibits some features that will question whether the morphological expression of direction has to wear Algonquian, or Algonquian-like, garments in order to convey its message and fulfill its duty. Finally, we will see the fundamental difference between languages whose grammatical relations might be said to bear relationship to direction, like the ones discussed in the preceding chapters, and those where direction and grammatical relations appear to be orthogonal to each other, like Sahaptian.

* Some scholars have serious reservations about a link between these Plateau languages and Penutian nowadays, but a connection to Klamath-Modoc seems quite plausible; cf. Campbell (1997: 120) and Mithun (1999: 477) for more details. Sahaptin is currently spoken by approximately 4,000 people in Oregon and Washington (Ethnologue), and Nez Perce counts about 700 elderly speakers in Northern Idaho according to the 1990 census. The Sahaptin variety discussed here has 50 elderly speakers on the Umatilla Reservation in Oregon.

1. Sahaptin

Rigsby & Rude (1996: 666) describe the Sahaptin dialects as syntactically uniform while displaying divergence as to lexicon and low-level phonology. The main split is between a southern and a northern group, and the latter is further subdivided into northwestern (Klikitat, Yakima, Taitnapam, and Pshwanwapam) and northeastern (Wanapam, Palouse, Walla Walla, and Lower Snake). The southern or Columbia River group includes Celilo, John Day, Rock Creek, Warm Springs, and Umatilla. The present analysis is based on Rigsby & Rude's account of the latter dialect, but other Sahaptin varieties are occasionally referred to as well.

1.1 Essentials of Umatilla Sahaptin

Umatilla Sahaptin is a synthetic and basically agglutinative language, with most of its inflective traits in the pronominal paradigms to be discussed here. Especially relevant for the purposes at hand is the fact that SAPs are marked, like a few modal and evidential categories, by means of enclitics attached to the first word of a clause. 3rd person markers appear as prefixes on verbs, and case markers are suffixed to nominals, pronouns, and demonstratives. Inflectional verb affixes also include tense, aspect, mood, causative, and applicative markers. The imperative suffix distinguishes between singular and plural subjects (S/A) and need not worry us here. Independent pronouns are present only when topical, emphatic, or contrastive. Word order is potentially free and sensitive to the pragmatic status of the constituents, the clause-initial position being typically occupied by topics.

Observe the morphology summarized in (1) and Table V-1 below:

(1) UMATILLA SAHAPTIN CASE MARKING (SELECTION)

a. Unmarked: default A with transitives, S with intransitives

b. Objective: O with monotransitives, E with ditransitives (*-na* non-human, human singular, *-inaman* human dual, *-maaman* human plural)

c. Ergative

c1) "inverse ergative" *-nɨm*: A in 3→SAP configurations (*i*-marked verb)

c2) "obviative ergative" *-in*: A in 3^{LP}→3^{HP} configurations (*pá*-marked verb)

Table V-1
UMATILLA SAHAPTIN PERSONAL MORPHOLOGY

O \ A	1s	1pe	1pi	2s	2p	3s	3p
1s				=nam pá-	=pam	=naš i-	=naš pa-
1pe				=nam	=pam	=nataš i-	=nataš pa-
1pi						=na i-	=na pa-
2s	=maš	=mataš				=nam i-	=nam pa-
2p	=mataš	=mataš				=pam i-	=pam pa-
3s	=naš á-	=nataš á-	=na á-	=nam á-	=pam á-	i- / pá-	pa- / patá-
3p	=naš á-	=nataš á-	=na á-	=nam á-	=pam á-	i-	pa-
itr.	=naš	=nataš	=na	=nam	=pam	i-	pa-
poss.	=naš	=nataš	=na	=maš	=mataš	á-	á-

from Rigsby & Rude (1996: 676)

The enclitics clearly distinguish between mixed and local scenarios. In the former, SAPs are marked exactly as in intransitive clauses irrespective of whether they are actors or undergoers, so here SAP marking follows a neutral pattern[1]—but note that external SAP pronouns follow an accusative pattern distinguishing S/A (unmarked) from O (objective) forms.[2]

(2) UMATILLA SAHAPTIN PERSONAL PRONOUNS (Rigsby & Rude 1996:682f)

	unmarked	objective
a. 1s	ín	ináy~ína
b. 1d	napiiní~nápiin	napiinamanáy
c. 1p	náma	naamanáy~náaman
d. 2s	ím	imanáy
e. 2d	imiiní	imiinamanáy
f. 2p	imáy	imaamanáy
g. 3s	pɬn	paanáy
h. 3d	piiní	piinamanáy
i. 3p	pmáy	paamanáy

3rd person unmarked forms correspond to the S function, and objective forms to an O/E primary object. In the A function, either the unmarked forms in (2) or the ergative ones in (3) are used, their distribution being governed by the principles stated in (1) above:

[1] There is some phonologically conditioned allomorphy regarding these SAP enclitics in Sahaptin (in particular, *=naš* can also appear as *=aš* or *=š*, *=nataš* as *=ataš* or *=taš*, and *=nam* as *=am* or *=m*); cf. Rigsby & Rude (1996: 675) for more details.

[2] Genitive forms and other cases have been omitted here for expository purposes.

(3) FURTHER UMATILLA SAHAPTIN PRONOUNS (Rigsby & Rude 1996:682f)

a. 3 obviative ergative (number unspecified): *piiní*

b. 3 inverse ergative (number unspecified): *pnɬ́m*

Finally observe that demonstratives usually have the forms detailed in (4), although *yúk* 'that (one) over there' distinguishes only singular and plural, and an unmarked and an objective form.

(4) UMATILLA SAHAPTIN DEMONSTRATIVES (SELECTION) (Rigsby & Rude 1996:683f)

	ABS	OBJ	OBV.ERG	INV.ERG
a_1. proximal s	čí	čaaná	čiiní	čɬ́nɬ́m
a_2. proximal d	čiiní	číinaman	↓	↓
a_3. proximal p	čɬ́ma	čáaman	↓	↓
b_1. distal s	k'^{w}áy	k^{w}aaná	k^{w}iiní	k^{w}ɬ́nɬ́m
b_2. distal d	k^{w}iiní	k^{w}iinamanáy	↓	↓
b_3. distal p	kúma	k^{w}aamanáy	↓	↓

The enclitics used in local scenarios are less straightforward than those occurring with other configurations: 2p→1 forms simply mark the actor (2p, i.e. *=pam*), as do 2s→1 forms (2s, i.e. *=nam*), but the 2s→1s interaction additionally requires the prefix *pá-* on the verb. The converse forms also treat the 1s→2s configuration differently by showing a specialized enclitic *=maš* in this very scenario, whereas all other forms are neutralized into *=mataš*.[3] More on these forms shall be said at the end of §1.2 below.

As to the prefixes, *i-* appears to be a 3sS/A marker (Rigsby & Rude's '3NOM'), but when a nontopical 3rd person singular acts upon a topical one, *pá-* is used instead. On the other hand, *á-* is a 3O marker unspecified for number (Rigsby & Rude's '3ABS'), but also a 3rd person possessive marker in a special construction to be discussed further down.[4] There is some important dialectal variation as to the function of the 3rd person prefix *á-* in Sahaptin. While Umatilla Sahaptin utilizes this suffix to mark 3rd person S's only when they are possessors, Northwest Sahaptin as recorded in Jacobs (1929) and analyzed in Rude (1994) appears to allow for optional marking with this suffix in any intransitive clause, where Umatilla would require *i-*.

The prefix *pa-* marks 3pS/A, but when a 3rd person plural acts upon a topical 3rd person singular, *patá-* appears on the verb. Therefore, 3rd person marking follows an accusative pattern but allows for a pragmatic distinction

[3] This situation is similar to the one found in Mapudungun; cf. Chapter VII.

[4] The 3O prefix *á-* appears as *áw-* before vowels.

with singular undergoers; when a nontopical 3rd person acts upon a topical one, the usual markers are overridden by *pá-* or *patá-*. As to the origin of these prefixes, internal and comparative evidence suggests that *pá-* developed from a generalized plural *pa-* and *patá-* from the fusing of an older enclitic *=pat* '3pS/A' (related to *pa-*) and the prefix *á-* '3O' (Rude 1994: 117, Rigsby & Rude 1996: 675). Whereas Northeast Sahaptin shows the cognates *pá-* and *paʔá-* with the same functions as *pá-/patá-*, Northwest Sahaptin marks the special 3p→3s^{HP} configuration by means of an enclitic *=pat* and a verbal prefix *á-*.

1.2 Interaction of nominal and verbal marking

Intransitive clauses

In order to understand how these personal markers and case endings interact, let us start off by considering simple intransitive clauses like the ones in (5):

(5) UMATILLA SAHAPTIN INTRANSITIVE CLAUSES (Rigsby & Rude 1996:673f,679)

a. Kú k^{w}ná **pa**-winanúu-x̣an-a láx̣^{w}ayx̣-pa čúuš-pa.
and there 3pS/A-swim-HAB-PT hot-LOC water-LOC
'And there they would bathe in the hot water.'

b. **Ł**wínš **i**-wínan-a.
man 3sS/A-go-PT
'The man went.'

c. Túx̣-šan-a=**aš** níit-yaw.
return-IPFV-PT=1s house-DAT
'I was returning to the house.'

The 3rd person appears marked on the verb by the prefixes *pa-* (plural) and *i-* (singular), and there is no nominal marking indicating semantic core roles or grammatical relations. SAPs are marked as enclitics.

Monotransitive clauses

In mixed scenarios with SAP actors and 3rd person undergoers, the former are marked by means of the same enclitics used in S function, and the latter are marked by means of the *á-* prefix on the verb, irrespective of number. If an external nominal is coreferential with the 3rd person undergoer, it appears in the objective case (obligatorily if human).

(6) UMATILLA SAHAPTIN MIXED TRANSITIVE CLAUSES I (Rigsby & Rude 1996:676f)

a. Ín=**aš** **á**-tuxnana yáamaš(-**na**).
1sNOM=1s 3O-shot mule.deer-OBJ
'I shot a mule deer.'

b. Ín=**aš** **á**-q'inu-ša awínš-in-**aman**.
1sNOM=1s 3O-see-IPFV men-d-pOBJ
'I see the two men.'

c. Čáw=**nam** paamaná **á**-yk-ša?
NEG=2s 3pOBJ 3O-hear-IPFV
'Don't you$_s$ hear them?'

The above situation differs from the one found in the mixed scenarios with 3rd person actors and SAP undergoers. The prefix on the verb is the same as for 3S/A (*i-* or *pa-* for singular and plural, respectively) and the enclitic is also the same as for SAP in S and in A functions, but external actor nominals appear in the so-called inverse ergative case. The examples below illustrate this pattern with the monotransitive predicate *q'ínu-* 'see' (a) and an intransitive predicate *wyánawi* 'arrive' turned monotransitive by addition of the applicative suffix *-(y)awa(n)*[5] (b).

(7) UMATILLA SAHAPTIN MIXED TRANSITIVE CLAUSES II (Rigsby & Rude 1996:677,679)

a. **ɬ**wínš-**nɨm**=**nam** **i**-q'ínu-ša.
man-INV.ERG=2s 3sS/A-see-IPFV
'The man sees you$_s$.'

b. **ɬ**wínš-**nɨm**=**naš** **i**-wyánawi-yawan-a.
man-INV.ERG=1s 3sS/A-arrive-APPL-PT
'The man came to me / my place.'

The opposition between the mixed transitive clauses in (6) and those in (7) above shows that there is no direction marking on the verb, nor do the clitics react to the shift from SAP→3 to 3→SAP. However, case does show a reaction in the form of the inverse ergative marking *-nɨm*.

Now consider the non-local scenarios, where there does not appear to be a rigid opposition between different constructions that responds to the inherent semantics or reference of the NPs. By contrast, there are different constructions depending on the pragmatic status of the referents, as shown in (8):

[5] This suffix is called APPLICATIVE in Rude (1997a) and DIRECTIVE in Rigsby & Rude (1996).

(8) UMATILLA SAHAPTIN NON-LOCAL TRANSITIVE CLAUSES (Rigsby & Rude 1996:676)

a. Ɬwínš **i**-tuχnana yáamaš-**na**.
man 3sS/A-shot mule.deer-OBJ
'The man$_{prox}$ shot a mule deer$_{obv}$.'

b. Ɬwínš-**in** **pá**-tuχnana yáamaš-**na**.
man-OBV.ERG PÁ-shot mule.deer-OBJ
'The man$_{obv}$ shot a mule deer$_{prox}$.'

In (a), the actor is unmarked and the undergoer appears in the objective case, whereas in (b) the actor is marked with the so-called obviative ergative suffix *-in* and the undergoer with the objective marker *-na*. In the non-local scenarios, verbal marking reflects an opposition between the $3^{HP}\rightarrow3^{LP}$ and $3^{LP}\rightarrow3^{HP}$ configurations: the former have *i-* or *pa-* prefixes, while the latter show *pá-* or *patá-* prefixes.

If this were the end of the story, one might be tempted to say that the opposition between *i-/pa-* and *pá-/patá-* encodes pragmatic direction only, since the mixed scenarios do not display an analogous opposition in the verbal morphology. Nevertheless, the local scenarios show that there is more to this *pá-* than meets the eye in the non-local scenarios. The following are sentences from Northwest Sahaptin with identical morphological make-up to Umatilla Sahaptin and show the minimal local scenarios where only singular SAPs are involved:

(9) NORTHWEST SAHAPTIN MLS CLAUSES (Rude 1994:103)

a. Áw=**maš** twána-ta.
now-1sA:2sO follow-FUT
'I shall follow you$_s$ now.'

b. Túk'waš=**maš** ní-ta.
cane=1sA:2sE give-FUT
'I shall give you$_s$ a cane.'

c. Ku=**nam** áw **pá**-yk-ša.
and=2s now PÁ-hear-IPFV
'And now you$_s$ hear me.'

d. Níipt=**nam** **pá**-ni-ta.
two=2s PÁ-give-FUT
'You$_s$ will give me two.'

As mentioned above, the enclitic *=maš* corresponds exactly to the meaning '1s→2s', whereas the converse configuration 2s→1s is expressed by the neutral 2s enclitic *=nam* and the prefix *pá-* on the verb. Thus, the latter configuration is marked on the verb by means of the same prefix that marks pragmatic inverse in the non-local scenarios. This is why Fadden (2000) follows Rude (1994) in calling *pá-* INVERSE and postulating an indexability hierarchy 1 > 2 > 3 supplemented by the pragmatic component described above.

Evidence from the extended local scenarios casts some doubt on the adequacy of this neat terminology, though. 2p→1 forms, which should be

inverse according to the hierarchy 1 > 2 > 3, fail to mark the verb with *pá-* and simply express the actor (*=pam*), and so do 2s→1pe forms (*=nam*). 1→2 extended forms (those where more than two arguments are involved) could in principle be straightforwardly direct but neutralize all oppositions and appear marked with an underspecified clitic *=mataš* instead.

Detransitive clauses

There is an intermediate area between the intransitive and the transitive constructions discussed above, which Rude, following Heath (1976b), has called "antipassive" in virtually all his work on Sahaptian. Heath defines anti-passivization as "a transformation by which [a transitive object] is deleted or demoted to a minor case while [the transitive subject] becomes surface [intransitive subject]" (1976b: 202). Most of the subsequent research has been in the vein of Van Valin (1980) and Dixon (1994) and need not be expounded in detail here. I have preferred to call this in-between DETRANSITIVE because some of the constructions Heath originally identified as antipassives (e.g. English *he drinks*) have been analyzed this way somewhat reluctantly later on, and the usage of the term ANTIPASSIVE in the literature often seems to include the implicit or explicit additional requirement that the predicate be marked with a detransitivizing morpheme.

Be it as it may, observe the two ways of conveying a state of affairs where two arguments are involved:

(10) SAHAPTIN BIPERSONAL CLAUSES I (Rude 1997b:329)

a. Tílaaki i-nána-a k'úsi-**na**.
woman 3sS/A-bring-PT horse-OBJ

b. Tílaaki i-nánan-a k'úsi.
woman 3sS/A-bring-PT horse

Both: 'The woman brought the horse.'

Whereas in (a) the undergoer is marked with the objective case suffix *-na*, in (b) both NPs are obligatorily unmarked for case. There is no difference in verbal marking between (a) and (b), the 3sS/A prefix *i-* occurring on both predicates—more accurately, in 3sA function in (a) and 3sS function in (b).

But further observe in (11) below why this is an area rather than a simple construction. In (a), a monotransitive clause, the verb is marked for 3rd person undergoer and the coreferential nominal *k'úsi* 'horse' appears in the objective case. In (b), only the verbal marking has been retained, so the predicate is still both semantically and morphosyntactically transitive, but the nominal has lost its case marking. In (c), the above traces of transitivity have been removed.

(11) SAHAPTIN BIPERSONAL CLAUSES II (Rude 1997b:329f)

a. **Á**-nanan-a=aš k'úsi-**na**.
3O-bring-PT=1s horse-OBJ

b. **Á**-nanan-a=aš k'úsi.
3O-bring-PT=1s horse

c. Nánan-a=aš k'úsi.
bring-PT=1s horse

All three: 'I brought the horse.'

As to the function of these detransitive constructions, see the comments on the Nez Perce parallel further down (§2.2).

The possessive construction

More germane to our present discussion is the clause structure described by Rigsby & Rude (1996: 675f) and Rude (1999), which I have called POSSESSIVE CONSTRUCTION here. In clauses with genitive copulas or intransitives with possessive subjects, 3rd person is marked as *á-* on the verb, SAPs appear as *=naš* (1s), *=nataš* (1pe), *=na* (1pi), *=maš* (2s) and *=mataš* (2p), and the external 3rd person nominal coreferential with the possessor takes the genitive case. A simple example of this would be the following:

(12) UMATILLA SAHAPTIN PREDICATIVE POSSESSION (Rigsby & Rude 1996:678)

ẋ^{w}isaat-**mí** **á**-wa.
old.man-sGEN 3O-be
'It is the old man's.'

Additionally, consider the examples in (13) below, where attributive possession and/or beneficiaries come into play. A construction like the one exemplified in (a) is utilized in order to highlight the possessor, and it is as if the clause were ditransitive, but the distinctive marking *-ay* (glossed "genitive" here, following Rigsby and Rude 1996) appears on the verb. In (b) we see an otherwise ordinary monotransitive clause where both the possessor and the possessee appear in the objective case, and it is the latter that is highlighted. In other words, according to the authors of the language description, the structural opposition is accompanied by a functional contrast as to which referent is foregrounded in discourse.

(13) UMATILLA SAHAPTIN POSSESIVE CONSTRUCTION (Rigsby & Rude 1996:680)

a. Q'ínw-**ay**-šan-a=maš **imanáy** k'úsi.
see-GEN-IPFV-PT=1sA:2sO 2sOBJ horse

b. **Á**-q'inu-šan-a=aš **iminanáy** k'úsi-**na**.
3O-see-IPFV-PT=1s 2sGEN horse-OBJ

Both: 'I saw your$_s$ horse.'

The possessive construction is significant because of two things. First, it makes the analysis of *á-* in terms of 3rd person marker more plausible than an account labeling it "direct". Second, it casts new light on the SAP clitics appearing in local scenarios and enriches the reference range of 3rd person *á-*. Table V-2 below compares the various enclitics already shown in Table V-1 above:

Table V-2
PRONOMINAL ENCLITICS ACCORDING TO CLAUSE TYPE

	1s	1pe	1pi	2s	2p
itr., tr.	=naš	=nataš	=na	=nam	=pam
poss.	=naš	=nataš	=na	=maš	=mataš

1st person forms are identical in all clauses, but 2nd person forms differ. Moreover, the latter coincide with those occurring in transitive clauses for the 1→2 configurations (*=maš* for 1s→2s and *=mataš* for the rest). In view of this idiosyncratic distribution, it is probably safe not to treat *=maš* and *=mataš* as synchronically compositional.

1.3 Other Sahaptin constructions

A brief note on ditransitives, causatives, and passives shall complete this account of Sahaptin alignment and direction marking systems. As already mentioned above, human beneficiaries in ditransitive clauses pattern like undergoers in transitive ones with regard to both case and verbal marking (i.e., they are primary objects, cf. Rude 1992, 1997b). Consider the cases in (14) below; in the first two sentences, the non-human patient is unmarked —remember that in a monotransitive clause it would have taken the objective case if human—, whereas the independent pronoun *ím* 'you$_s$' appears in the dative when all arguments are human (c):

(14) UMATILLA SAHAPTIN DITRANSITIVE CLAUSES

a. x̣^{w}íɬsaat-niɬm=naš i-ní-ya (ináy) k'úsi.
old.man-INV.ERG=1s 3sS/A-give-PT 1sOBJ horse
'The old man gave me a horse.' (Rigsby & Rude 1996:674)

b. Á-ny-a=aš pa-niɬníipt kúsi-yin napwinanák.
3O-give-PT=1s DP-two horse-d both:OBJ
'I gave two horses each to both of them.' (Rigsby & Rude 1996:680)

c. I-ní-ya=aš imíyaw.
3S/A-give-PT=1s 2sDAT
'S/he gave me to you$_{s}$.' (Rude 1997a:132)

Causatives are marked by a prefix *šap(á)- ~ -šap- ~ sap-* or the prefix *ča-* and introduce a causer to the clause, as in (15) below. Note that in (a) the configuration is $3^{LP} \rightarrow 3^{HP}$.

(15) UMATILLA SAHAPTIN CAUSATIVE CLAUSES (Rigsby & Rude 1996:679,686)

a. Pá-šapa-'ani-ya x̣apiɬmí miyanaš-mí-yay.
PÁ-CAUS-make-PT knife child-sGEN-BEN
'S/he had him/her make a knife for the child.'

b. Ín=aš á-šapa-tk^{w}atan-a núsux̣.
1sNOM=1s 3O-CAUS-eat-PT salmon
'I made him/her eat salmon.'

Passives do not complicate the picture already sketched because they are similar to their English equivalents, with the proviso that they are obligatorily agentless. They are constructed with a conjugated verb meaning 'be' and a participle-like stativized form of the main verb, as seen in the Northwest Sahaptin example below:

(16) NORTHWEST SAHAPTIN PASSIVE CLAUSE (Jacobs 1929, quoted in Rude 1994:105)

Ku i-wá-ta waník-i wáwtk^{w}t ku łk'^{w}í.
and 3sS/A-be-FUT name-STAT night and day
'And the night and day will be named.'

Neither of the additional constructions just illustrated, i.e. ditransitives, causatives and passives, poses any problems for the present analysis of Sahaptin direction marking, as will become clear in the next subsection.

1.4 Conclusion

Without considering comparative evidence from Nez Perce yet, the above leaves us with an intriguingly complex picture of the phenomena relevant for the present study. First, it appears from the paradigm in the local and non-local scenarios that 3rd persons follow an accusative head-marking pattern (*i-/pa-* '3sS/A', *á-*/Ø- '3O') and SAPs a neutral detached-marking one (*=maš*, *=nam*, and the other enclitics). Second, 3rd person subjects may be said to be privileged as to access to verbal marking when compared to 3rd person objects, because the prefix combinations **i-á-* '3s→3' and **pa-á-* '3p→3' do not occur. In other words, the access to morphological marking is governed by a relational hierarchy Subj > Obj. Third, verbal direction marking does not include core direction but shows pragmatic direction (*pá-/patá-* as marked member of a formally privative opposition), and Rude (1994) makes it clear that the pragmatic inverse is non-promotional. Fourth, core direction is present as a category explaining the particular case opposition as regards the inverse ergative *-nim* in the 3→SAP configuration. Fifth, the local scenarios are notoriously eccentric in that they may (i) align with the pragmatic direction system (2s→1s), (ii) align with the normal grouping patterns (2→1R), (iii) show a characteristic and perhaps historically compositional form (1s→2s) or (iv) show an underspecified portmanteau (1→2R). Finally, observe that there is case marking concomitant with pragmatic direction: obviative ergative *-in*.

Summing up the above information about prefixes and enclitics, Umatilla Sahaptin direction can be described as follows:

(17) FUNCTIONAL ASPECTS OF UMATILLA SAHAPTIN DIRECTION

a. Focality: core direction (SAP↔3) is low-focal, local direction is high-focal (1s↔2s) or low-focal (1→2R), pragmatic direction is high-focal (3s↔3)
b. Domains: core direction, local direction and pragmatic direction; no global direction

(18) FORMAL ASPECTS OF UMATILLA SAHAPTIN DIRECTION

a. Locus: dependent marking (core direction), double marking (pragmatic direction), detached and head marking (local direction)
b. Alignment: subject / primary object / secondary object; relational hierarchy Subj > Obj governs access to morphological marking for 3rd persons

2. Nez Perce

Upper and Lower Nez Perce are much closer to each other than the different Sahaptin varieties and shall be treated as a single language here. The eastern sibling of Sahaptin is similar in many ways to what we have seen so far. Let me mention before proceeding any further some differences that are significant for our present purposes.

First, the SAP enclitics show a different distribution: they surface only on some particles and adverbials that tend to occur clause-initially, like the subordinator *ke*, the interrogatives *míne* and *mec*, the negation *mí's*, *kú'* 'maybe, possibly', *qece* 'even (when)', the yes/no question particle *wéet* and the 2s pronominal *'ée* (Aoki 1970: 127f).[6] The forms are seen in (19). Observe that *=mex* and *=pemex* are compositional: *=m=x* and *=pem=x*, respectively.

(19) NEZ PERCE SAP ENCLITICS (Aoki 1970:128f, Rude 1985:135)

a.	*=x*[7]	[+sp,-ad]	(=1s,1pe)
b.	*=nm*[8]	[+sp,+ad]	(=1pi)
c.	*=m*	[-sp,+ad,s]	(=2s)
d.	*=pem*	[-sp,+ad,p]	(=2p)
e.	*=mex*	1s→2s	
f.	*=pemex*	1→2R	

Furthermore, S/A number is not only marked by means of verbal prefixes but also by an opposition between the elements *E* (singular) and *i* (plural) appearing in most of the TAM suffixes to the right of the verb stem (cf. Rude 1995 for details).[9] Finally, the case system is not isomorphic to the Sahaptin one in at least one crucial respect: the cognate of the Sahaptin inverse ergative marker *-nim* is an ergative suffix. This section shows that these differences are of paramount importance for the characterization of direction in Nez Perce, and Section 3 compares the system found in this language with the one of Umatilla Sahaptin.

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[6] Further differences between the Nez Perce and the Sahaptin SAPs enclitics include the following: Nez Perce *=mex* and *=pemex* do not code possessors, and 2nd person forms are omitted from the yes/no question particle *wéet* (Rude, p.c.).

[7] This enclitic may appear also as *=kex* or *=eex*.

[8] This enclitic may appear also as *=kenm*, *=eenm*, or *=nenm*.

[9] Some of the Nez Perce forms are given with capital letters that refer to vowels subject to vowel harmony. Also observe that stressed vowels lengthen, so an underlying *pÉ-* may appear as *pée-* or *páa-*, and *nÉs-* as *nées-* or *náas-*, on actual verb forms.

2.1 Essentials of Nez Perce

Consider the pronominal prefixes appearing on Nez Perce finite verb forms shown in Table V-3 below. Observe that many forms are underspecified when compared to Sahaptin as a consequence of the frequently missing SAP enclitics.[10] There is a plural marker *pE-* unspecified for person but reserved for S/A's (recall Sahaptin *pa-*), and a plural marker *nÉs-* (absent in Sahaptin) also unspecified for person but marking undergoers. It is important to bear in mind that *pE-* does not appear in most TAM forms due to the fact that S/A number is marked by the opposition mentioned above in the suffixes.

Table V-3
NEZ PERCE PERSONAL MORPHOLOGY (PREFIXES)

U \ A	1s	1p	2s	2p	3s	3p
1s				pE-	hi-	hi-pE-
1p			nÉs-	pE-nÉs-	hi-nÉs-	hi-pE-nÉs-
2s		pE-			hi-	hi-pE-
2p	nÉs-	pE-nÉs-			hi-nÉs-	hi-pE-nÉs-
3s	'E-	'E-pE-	'E-	'E-pE-	pÉ-	pÉ-
3p	'E-nÉs-	'E-pE-nÉs-	'E-nÉs-	'E-pE-nÉs-	hi-nÉs-	hi-nÉs-
itr.	—	pE-	—	pE-	hi-	hi-pE-

from Rude (1985: 30f, 1988)

The situation in the 3rd person deserves special attention. The marker *hi-* (cognate of Sahaptin *i-*) appears in almost all configurations with a 3rd person S or A—the exception being the instances where the undergoer is a 3rd person singular: here, a prefix *pÉ-* (cognate of Sahaptin *pá-*) occurs. Notably, this prefix is incompatible with both plural actor *pE-* and plural undergoer *nÉs-* and so simply *pÉ-* and *hi-nÉs-* occur where **pÉ-pE-* and **pÉ-nÉs-* would be expected.[11] Other than that, 3rd person undergoers appear as *'E-*.

The functional yield of the personal prefixes is shown in (20):

[10] I have departed from Rude's analysis of Nez Perce here in that he postulates a zero SAP prefix marking S/A's and possessors, whereas I have preferred to do without a zero morph and work with unmarked forms instead. I fail to see why this Ø-prefix is necessary in Nez Perce as opposed to Sahaptin, where no such morph is postulated in Rigsby & Rude (1996).

[11] Rude (1988: 550) mentions an elicited form ***pée-pe-**'wi-ye* (PÉ-pO-shoot-PT) 'they shot it' where *pÉ-* and *pE-* cooccur, but he is positive about the ungrammaticality of such forms (p.c.).

(20) NEZ PERCE PERSONAL PREFIX POSITIONS

a.	Position 1:	*'E-*	3O/E
		hi-	3S; 3A in 3→SAP, 3→3p
		pÉ-	3→3s
b.	Position 2:	*pE-*	pS/A (necessary only in certain aspects)
c.	Position 3:	*nÉs-*	pO/E
d.	Restriction :	**pÉ-nÉs-*	does not occur

Nez Perce personal pronouns are shown in (21). As with Sahaptin, genitive and the other cases have been neglected here.

(21) NEZ PERCE PERSONAL PRONOUNS I (Rude 1985:123)

	unmarked	objective	ergative
a. 1s	'íin	'íine	—
b. 1p	núun	núune	—
c. 2s	'íim	'imené	—
d. 2p/3p	'imé	'imuuné	—/'iméem
e. 3s	'ipí	'ipné	'ipním

The unmarked SAP pronouns correspond to an S/A pivot while the unmarked 3rd person forms are used when the 3rd person is in S function:

(22) NEZ PERCE PERSONAL PRONOUNS II (Rude 1985:124)

Ká'la	**'imé**	hi-pe-timmíyune	kaa	'inekíix
just	2p/3pNOM	3S/A-pS/A-deliberated	and	even.though
'íin	'e-nées-ne:	"Wéet'u'!"		
1sNOM	3O/E-pO/E-told	no		

'They just deliberated even though I told them: "No!"'

In addition, there are three frequent personal pronouns that do not distinguish case: *'ée* '2s', *'éetx* '2p', and *kíye* '1p'. When the latter two occur coreferentially with the undergoer in a clause, the verb does not appear *nÉs*-marked.

The reader is referred to Rude (1985: 129) for a complete declension paradigm of the proximal and distal demonstratives *kíi* and *yoẋ*; suffice it to say here that they distinguish the same three forms as the 3rd person pronouns shown in (21) above and lexical nouns as detailed in (28) below: unmarked (S), ergative (A) and objective (O/E).

The plural subject marker *pE-*

A brief consideration of verbal number marking shall show why the analysis of alignment need not take full account of all its particular details. As already noted, the basic opposition in the 3rd person is between *hi-* and *hi-pE-* and can be seen in the first two sentences of Example (23). In addition, a number-marking suffix may make *pE-* unnecessary; (c) below in the imperfective recent past is a case in point:

(23) NEZ PERCE NUMBER MARKING I (Rude 1995:66, Rude 1997a:137)

a. **Hi**-qqu-líixn-e.
3S/A-gallop-move-PT
'S/he galloped.'

b. **Hi-pe**-qqu-líixn-e.
3S/A-pS/A-gallop-move-PT
'They galloped.'

c. **Hi**-yayláak-s-**i**-qa kúus-pe.
3S/A-sink.into-IPFV-pS/A-RECPT water-LOC
'They were sinking into the water.'

Whereas some adverbial prefixes like *qqu-* 'gallop' merely specify manner, some rather infrequent prefixes like *téel-* 'gallop' include the notion of plurality, and therefore the yield of the pronominal prefixes is different:

(24) NEZ PERCE NUMBER MARKING II (Rude 1995:66)

Hi-téel-ixn-e.
3S/A-gallop:p-move-PT
'They galloped (as a group).'

Hi-pe-téel-ixn-e.
3S/A-pS/A-gallop:p-move-PT
'They galloped (as individuals).'

The main conclusion to be drawn from these data is that, although the suffixes are obviously an integral part of the alignment system, they can be dismissed for the purposes of the present analysis because the S/A number suffix and *pE-* are in complementary distribution.

Possessive constructions

Rude (1985: 196f) discusses a Nez Perce construction parallel to the Sahaptin possessive construction we saw in §1.2 above. Although he is more concerned with issues of discourse function and syntactic promotion (see also Rude 1986a, 1986b), the morphological make-up of this construction is as relevant for our purposes as the Sahaptin one. Observe the examples in (25):

(25) NEZ PERCE GENITIVE PROMOTION I (Rude 1985:207)

a. ’Íinim tim’íne **hi**-k’óomay-ca.
1sGEN heart 3S/A-be.sick-PROG:sS/A

b. ’Íinim tim’íne wées k’óomayni’n.
1sGEN heart be:PROG:sS/A be.sick:STAT

Both: ‘My heart is sick.’

The intransitive verb agrees with the possessee in (a) and with the possessor in (b), an example of what Rude calls genitive promotion to intransitive subject. SAPs are marked in neither normal clauses nor possessive constructions on the verb, but 3rd persons show two different prefixes, as shown in (26):

(26) NEZ PERCE GENITIVE PROMOTION II (Rude 1985:208)

a. Kaa wáaqo’ tim’áay-nim píke **hi**-wíi-nim-e.
and now maiden-GEN mother 3S/A-weep-CIS-PT
‘And now the maiden’s mother wept.’

b. ’inekíix qáaca’c **’e**-wíi-nim-e
even.though grandmother 3O/E-weep-CIS-PT
‘even though his grandmother wept’

In the normal clause (a), the possessee *píke* ‘mother’ is coreferential with the argument marked on the verb as *hi-* ‘3S/A’. On the contrary, it is the possessor that appears on the verb in (b) by means of *’E-*.[12]

Applicative constructions

The applicative constructions in Nez Perce include the promotion of ablatives and comitatives. The examples in (27) below show that also beneficiaries in normal clauses (a) can be promoted to direct objects of verbs that are marked with a suffix *-’(E)n(i)* (appearing as *-’(E)y* before inflectional suffixes beginning with *s*), as in (b). Example (c) shows that the same is true of possessors.

[12] Rude (1985: 208) concluded that possessor *’E-* was not identical to 3O *’E-* because the latter was supposed to have an allomorph *’Ew-* before *’* and *h* whereas the former was invariable. Nevertheless, after learning more about the behavior of these prefixes he now says that there is no morphophonemic difference between the two prefixes (p.c.).

(27) NEZ PERCE APPLICATIVES (SELECTION) (Rude 1985:185,200)

a. Kawó' 'éeteex wéc'u' 'e-kúuse
then surely:e stop 3O/E-do:PROG:sS/A
'étke titóoqa-'ayn 'a-kosáaqa.
because people-BEN 3O/E-do:PROG:RECPT:sS/A
'Then I'm stopping it because I was doing it for the people.'

b. Qáaca'c-pim **páa**-nya-**'ny**-a tim'úuni
grandmother-ERG pÉ-make-B.APPL-PT bow
'imées-nim tupée's-nim.
deer-GEN rib-GEN
'His grandmother made him a bow of deer's rib.'

c. 'Iceyéeye-ne páhap[13] **páa**-'nax-payka-**'y**-six.
coyote-OBJ daughter pÉ-carry-arrive-G.APPL-PROG:pS/A
'They are bringing Coyote's daughter.'

2.2 Interaction of nominal and verbal marking

Nez Perce case marking is simpler than what we saw in Sahaptin. There is a split system in that SAP external pronouns, as we have seen, follow an accusative pattern while lexical 3rd person arguments appear in the same three cases as the 3rd person pronouns already given in (21) above:[14]

(28) NEZ PERCE 3RD PERSON CASE MARKING (SELECTION) I

a. Unmarked: S with intransitives
b. Objective *-nE*: O with monotransitives, E with ditransitives
c. Ergative *-n(i)m*: A with transitives[15]

[13] Appears erroneously as *páahap* in the original (Rude, p.c.).

[14] Woolford (1997) has proposed a formalist analysis of Nez Perce case that differs from Rude's in an important respect. Since what I have called here detransitive construction (Rude's "antipassive") shows neither oblique nominal marking nor any special marking on the verb, Woolford considers it a transitive construction. Therefore, transitive clauses have two different case marking patterns: "nominative-accusative" (A-Ø O-Ø) and "ergative-objective" (A-*n(i)m* O-*nE*). This leads her, among other things, to classify the case system of Nez Perce as four-way instead of tripartite or three-way. Cf. the main text body further down for more on the Nez Perce detransitive construction.

[15] In Sahaptian languages, some kinship terms are inflected somewhat differently from the rest of nominals in that they take *-pim* instead of *-n(i)m* in the ergative when the possessor is coreferential with the subject, as in *qáaca'c-pim* 'grandmother-ERG' in Example (27). The Sahaptin cognate is *-pa*.

The examples in (29) showing how this tripartite system works are parallel to those in (3) in Chapter I. The unmarked S (*háama*) appears cross-referenced on the verb as *hi-*, and the ergative-marked A (*háama-nm*) appears as *pÉ-* since the undergoer is singular. The undergoer takes the accusative case ending *-ne*.

(29) NEZ PERCE 3RD PERSON CASE MARKING II (Rude 1988:547f)

a. Háama hi-páayna.
man 3S/A-came
'The man came.'

b. Háama-**nm** pée-'wiye wewúkiye-**ne**.
man-ERG PÉ-shot elk-OBJ
'The man shot an elk.'

Now consider the cases when there are no lexical NPs. In order to disambiguate some configurations, external pronominals for 3rd persons and SAPs may be used.

(30) NEZ PERCE CLAUSES WITHOUT LEXICAL NPS (Rude 1988:548f)

a. ('Íin) páayna.
1sNOM arrived
'I arrived.'

b. ('Ipí) **hi**-páayna.
3sNOM 3S/A-arrived
'S/he arrived.'

c. ('Ipním) **pée**-'wiye.
3sERG 3→3s-shot
'S/he shot it.'

d. 'Ewíi-m-e[16] 'íine.
shoot-CIS-PT 1sOBJ
'You$_s$ shot me.'

e. **Hi**-'wíye 'íine.
3→SAP-shot 1sOBJ
'S/he shot me.'

f. ('Íin) **'e**-'wíye.
1sNOM 3O/E-shot
'I shot it.'

As mentioned above, the more complicated cases are found with the non-local scenarios. Observe in Example (31) that the accusative marking is not obligatory with non-human undergoers (a, b, c), and that the combination of *pÉ-* and *pE-* or *nÉs-* is banned from the universe of possible prefix arrangements (b, c).

(31) NEZ PERCE NON-LOCAL CLAUSES (Rude 1988:550f, Rude 1985:251)

a. Háama-nm **pée**-twiixn-e wewúkiye-ne.
man-ERG PÉ-follow-PT elk-OBJ
'The man followed the elk.'

[16] *'Ewíime* appears erroneously as *'ewíye* in the original (Rude, p.c.).

b. **Hinées**-tiwiixn-e wewúkiye-ne.
3→p-follow-PT elk-OBJ
'S/he followed the elk_p.'

c. Sík'em kíne la'ám' **hináas**-paẋ^{w}iyo'qa[17]
horse this:LOC all 3→p-steal:COND
'Someone / they would steal all [our] horses here, …'

What justifies labeling Nez Perce *-n(i)m* simply ergative in contrast to the more differentiated characterization in Sahaptin is the fact that in the former language the suffix is obligatory irrespective of who is the undergoer. In a mixed scenario like 3→1, both languages require the marking on the NP:

(32) SAHAPTIN *-ɬim* AND NEZ PERCE *-n(i)m* I (Rude 1997a:119f)

SAHAPTIN		NEZ PERCE	
Ɬwínš-**ɬim**=naš	i-q'ínun-a.	Hi-héxn-e	háama-**nm**.
man-INV.ERG=1s	3sS/A-see-PT	3→SAP-see-PT	man-ERG

Both: 'The man saw me.'

However, in a non-local scenario only Nez Perce allows the ergative to appear on the nominal. Neither of the available Sahaptin constructions does, the pragmatic direct showing an unmarked actor and the pragmatic inverse marking the actor by means of the obviative ergative *-in* (which has a different origin, as the next section shall show).

(33) SAHAPTIN *-ɬim* AND NEZ PERCE *-n(i)m* II (Rude 1997a:119f)

a. NEZ PERCE Háama-**nm** pé-exn-e miya'ás-na.
man-ERG 3→3s-see-PT child-OBJ
'The man saw the child.'

b. SAHAPTIN
$3s^{HP}$→$3s^{LP}$ **Ɬ**wínš i-q'ínun-a miyánaš-na.
man 3sS/A-see-PT child-OBJ

$3s^{LP}$→$3s^{HP}$ **Ɬ**wínš-in pá-q'ínun-a miyánaš-na.
man-OBV.ERG PÁ-see-PT child-OBJ

Both: 'The man saw the child.'

[17] Appears as *hinéespeẋ^{w}iyo'qa* in the original (Rude, p.c.).

Detransitive and passive constructions

Although there is no need to be as explicit here as with Sahaptin with regard to constructions like the causative, the passive, etc., let me close this subsection by illustrating the Nez Perce parallels both to the detransitive constructions and to the passive construction.

(34) NEZ PERCE DETRANSITIVE CONSTRUCTION (Rude 1988:552)

Háama	**hi**-héxn-e	miyá'c.
man	3S/A-see-PT	child

'The man saw his child.'

According to Rude (1988, 1997a), this construction is less than half as frequent as the ordinary transitive one in texts and is used with lexical NP undergoers that are seldom definite and mostly inanimate. A salient function of the detransitive construction appears to be the encoding of coreferentiality of subject and possessor of the undergoer, as in Example (34), but Rude's research suggests that its most frequent function is the detopicalization of the undergoer.

The Nez Perce agentless passive is analogous to its Sahaptin counterpart, i.e. it employs a conjugated auxiliary (*wée* 'be' or *wic'ée* 'become') and a stativized verb form (characterized by *-i'n~-iin*). It is intransitive, since the external NP in O function appears unmarked for case and the auxiliary agrees in number with its S/A pivot and not with its former O argument:

(35) NEZ PERCE PASSIVE CONSTRUCTION (Rude 1985:163)

a.

Koná	**hi**-wc'éeye	han-**yíin**	tamáalwit.
there	3S/A-became	make-STAT	law

'There the law was made.'

b.

Mét'u	'óykalo	síiw-**yi'n**	**hi-wsíix**.
but	all	paint-STAT	3S/A-be:p

'But all are painted.'

Finally note the asymmetry between the detransitive and the passive: In the former, the demoted argument is also detopicalized but seldom suppressed from the clause, whereas the passive construction both demotes and suppresses the A.

2.3 A note on etymology and directionals

Before proceeding to a conclusion of the data presented for Nez Perce, let me briefly turn to what can be reconstructed as Proto-Sahaptian forms for some of the relevant nominal morphology described above:

(36) COGNATE SAHAPTIAN NOMINAL MORPHOLOGY (SELECTION) (Rude 1991, 1997a)

	SAHAPTIN	NEZ PERCE	PROTO-SAHAPTIAN
a.	*-in*	*-in*	associative *-*(i')in*
b.	*-nɨm*	*-n(i)m*	cislocative *-*ɨm*
c.	*-na(n)*	*-ne(n)*	translocative *-*(n)en*

The simplest case seems to be "associative" *-*(i')in*, which retains its comitative meaning both in Nez Perce (*pisít-**iin*** 'with [his/her] father') and Sahaptin (*tílaaki-**in*** 'with [his] wife'), and has developed two additional functions in the latter language: the dual (*ɨwínš* 'man' vs. *awínš-**in*** 'men$_d$') and the obviative ergative.

With regard to Nez Perce ergative *-n(i)m* and Sahaptin inverse ergative *-nɨm*, Rude (1991) postulates both a possible connection to a Pre-Sahaptian-Klamath locative *-*m* and a more certain Sahaptian etymon *-*ɨm*, which was a cislocative. This might have developed from a purely verbal cislocative like the one still present in Sahaptin (a) to a more grammatical function of 'hither' in the sense of 'toward me/us/you' and later 'me/us/you' attached to the nominal, like in (b) below. (Of course, it is also possible that both the ergative and the cislocative have evolved from a common source.) Moreover, both may cooccur in the same clause (c):

(37) COLUMBIA RIVER SAHAPTIN *-**ɨm*** AND *-**nɨm*** (Rude 1991:41)

a. Áw i-q'ínun-**ɨm**-a[18] wínš.
now 3sS/A-look(.at)-CIS-PT man
'Now the man looked this way.'

b. Áw=naš i-q'ínun-a wínš-**nɨm**.
now=1s 3sS/A-look(.at)-PT man-INV.ERG
'Now the man looked at me.'

c. Áw=naš x̣wísaat-**nɨm** i-twána-**m**-aš.
now=1s old.man-INV.ERG 3sS/A-follow-CIS-IPFV
'Now the old man is following me.'

As we have seen, Nez Perce *-n(i)m* is further developed than Columbia River Sahaptin *-nɨm* because the latter is restricted to 3→SAP configurations while the former is a generalized ergative. The intermediate stage can be appreciated in the Klikitat (NW) Sahaptin data in (38) below, where *-nɨm* occurs not with a 3s undergoer but with a 3p undergoer, which appears here as the enclitic *=pat*:

[18] Appears erroneously as *iq'ínumɨma* in the original (Rude, p.c.).

(38) KLIKITAT SAHAPTIN *-nɨm* (Jacobs 1929, quoted in Rude 1991:42)

Ku=pat	i-skáaw-a	wušiyáy-**nɨm**.
and=3p	3sS/A-scare-PT	Wood.Rat-INV.ERG

'Wood Rat scared them.'

Also Nez Perce accusative *-ne(n)* and Sahaptin objective *-na(n)* reconstruct as a directional, in this case a translocative. Rude (1997a) compares it to the Spanish preposition *a* 'to', which underwent an evolution from allative through dative to a human / definite objective ("prepositional accusative"). In many verbs the element *-(n)en* is frozen (e.g. **('i)néhn-en* > NzP *'iné́hne*, S *nána* 'carry away'), but in Northeastern Sahaptin it still appears as allative (*łíl̓x-**an*** 'to the beach'). This development path would explain why the suffix is not obligatory with non-human undergoers.

One reason for including this note on etymology and directionals here is that it makes the origin of both the Sahaptin and the Nez Perce case marking patterns clearer. However, the main reason is that Nez Perce requires the cislocative on the verb if the configuration is 2→1; therefore, this suffix marks local direction. Remember that there is no functional need for such a device in Sahaptin, since the enclitics and the *pá*-marked form are enough to disambiguate without additional morphology:

(39) SAHAPTIAN LOCAL SCENARIOS (SELECTION) (Rude 1997a:121)

a. NEZ PERCE	Héexn-e.	Hexn-**ím**-e.
	see-PT	see-CIS-PT
	'I saw you$_s$.'	'You$_s$ saw me.'
b. SAHAPTIN	Q'ínun-a=maš.	Pá-q'inun-a=am.
	see-PT=1s→2s	PÁ-see-PT-2s
	'I saw you$_s$.'	'You$_s$ saw me.'

2.4 A brief note on Nez Perce syntax

It is difficult to be conclusive here as to syntactic pivots in Nez Perce. Word order (a coding property) is arguably free in that all six possible orderings of actor, undergoer and predicate are found, both in ordinary clauses with case marking and in detransitive constructions with unmarked nominals. (Unsurprisingly, Nez Perce displays another non-configurational trait, viz. discontinuous constituents.) The interrogatives *'isíi* 'who' and *'itúu* 'what' follow the tripartite case pattern of NPs and show therefore no neutralization of S and A or O. Equi-NP deletion is notably freer than if this process were pivot-driven, as seen in (40):

(40) NEZ PERCE EQUI-NP DELETION (Rude 1985:232)

a. Páa-mc'iya 'áayato-m kaa píst hihíne: …
3→3s-heard woman-ERG and father 3S/A:said
'The woman heard it and said to [her] father:… '

b. Konó' hi-wqsu'úce kaa péene háama-nm: …
there 3S/A-sit:sS/A and 3→3s:said man-ERG
'She is sitting there and the man said to her: …'

In (a), *'áayato* 'woman' is in A function in the first (transitive) clause and S function in the second (detransitive), whereas in (b), the S argument of the first (intransitive) clause and the O of the second (transitive) one are coreferential.

However, there is some evidence in favor of an accusative hypothesis in Nez Perce. Consider the following examples with the relativizer *ke*:

(41) NEZ PERCE RELATIVE CLAUSES (Rude 1985:242,245)

a. sepehitemene'wéet himeq'íis-kin'ix hitéeminwees kaa
teacher large-ABL school and
yoẋ ke híi-wes kinm wéetes-nim
that REL 3S/A-be:sS/A this:GEN land-GEN
yoẋ ke híi-wes spíinew-i'n
that REL 3S/A-be:sS/A measure-STAT
'a teacher from a large school which is of this land, which is measured'

b. ke 'itúu-nm pée-te'nwese
REL what-ERG 3→3s-speak:sS/A
'something that speaks to one'

In (a) two relative clauses are shown, the first with the simple intransitive predicate *híiwes* 'is' and the second with *híiwes spíinewi'n* 'is measured', a passive. That an agentive argument can be relativized upon is shown in (b), and so it appears that relativization works accusatively. In addition and predictably, causatives (marked by the verbal prefix *sepée-*) control either S or A arguments.

2.5 Conclusion

The prefix *'E-* is best thought of as marking 3rd person undergoer, analogously to its Sahaptin cognate *á-*, which amounts to saying these affixes are non-focal or unrestricted direction markers. As to access to verbal marking, 3rd person subjects are treated preferentially compared to 3rd person objects, the latter being marked only when the actor is non-3rd person. The only different configuration is 3→3s, which is marked with *pÉ-*. The local scenarios are rather

straightforward in that the 1→2 case is unmarked on the verb and the 2→1 case receives a cislocative suffix that may be called a local inverse marker. However, there are specialized compositional enclitics for the configurations 1s→2s (=*mex*) and 1→2R (=*pemex*).

Whereas case marking is simpler in Nez Perce than in Sahaptin, direction is less neat in the former than in the latter. There is no core direction distinguishing SAP→3 from 3→SAP configurations, and therefore no global direction, and there is no non-local direction either. However, the non-local scenarios are somewhat peculiar in that a particular prefix *pÉ-* appears whenever the undergoer is singular. These findings are summarized in (42) and (43):

(42) FUNCTIONAL ASPECTS OF NEZ PERCE DIRECTION

a. Focality: high-focal (local: 1s→2s; non-local: 3→3s); low-focal (local: 2→1, 1→2R); non-focal (3O/E, 3S/A)
b. Domains: local direction

(43) FORMAL ASPECTS OF NEZ PERCE DIRECTION

a. Locus: head marking (2→1; 3→3s; 3O/E, 3S/A) and detached marking (1s→2s, 1→2R)
b. Alignment: split case marking (accusative with SAPs and tripartite with 3rd persons); accusative traits in the syntax (subject, primary and secondary objects); access to 3rd person prefix slot is governed by the relational hierarchy Subj > Obj

3. Summary of Sahaptian languages

Let us now look at the bigger picture presented by both Sahaptian languages in order to arrive at an adequate characterization of the Umatilla Sahaptin and the Nez Perce systems.

Structural issues

The Umatilla Sahaptin verbal direction marking system interacts with nominal case in a double-marking pattern (non-local direction), whereas Nez Perce case marking is orthogonal to direction. The former further marks pragmatic case and shows an ancillary high-focal local direction marker in the 2s→1s configuration. By contrast, Nez Perce does not show pragmatic case with 3s undergoers. Nez Perce *pÉ-* could be said to mark direction in the sense that any

comparable portmanteau does. Nevertheless, it does not reflect a fundamental underlying hierarchy, and therefore I will not label it non-local direction here.

Umatilla Sahaptin shows a dependent-marking pattern that expresses core direction, and its case system is further sensitive to an indexability hierarchy SAP > 3' > 3", whereas Nez Perce case marking is accusative with SAPs and tripartite with 3rd persons. While Nez Perce local direction enclitics *=mex* '1s→2s' and *=pemex* '1→2R' appear only attached to certain clause-initial particles and adverbs, their Umatilla Sahaptin counterparts *=maš* '1s→2s' and *=mataš* '1→2R' regularly occur in Wackernagel position. Both languages distinguish between singular and plural undergoers in the non-local scenarios. If *pá-* and *pÉ-* really evolved out of a former plural marker (as suggested by Rude 1991, 1994), they have developed fairly differently in the present-day languages.[19]

Both languages mark not only the 1→2 interactions but also the 2→1 configurations, but the question of a relative ranking is inconclusive. Although Umatilla Sahaptin marks the verb as inverse in the 2s→1s configuration, Nez Perce uses a different strategy to encode that meaning, and the 2→1R are unmarked, so the ranking 1 > 2 cannot be given more than a marginal or incipient status in Sahaptian.

Table V-4
SAHAPTIAN DIRECTION SYSTEMS

	Ia 3^{LP}→$3s^{HP}$	IIa 3→3s	IIIa 3→SAP	IVa 2→1	IVb 1→2	IIIb SAP→3	IIb 3→3p	Ib 3^{HP}→$3s^{LP}$
SAHAPTIN								
verbal	*pá-/patá-*	Ia|Ib	—	*pá-*/—	—	{	—	}
nominal	*-in→-na*	Ia|Ib	*-nim→Ø*	{		*Ø→-na*		}
clitic					*=maš/mataš*			
NEZ PERCE								
verbal	IIa|IIb	*pÉ-*	*Ø-*	*Ø-..-im*	*Ø*	*'E-*	*hi-nÉs-*	IIa|IIb
nominal	{	*-n(i)m→-ne*	}	{	*Ø→-ne*	}	*-n(i)m→-ne*	
clitic					*=mex/pemex*			

[19] All examples given in this chapter involve finite verb forms, and Sahaptian nonfinite verb forms are rather infrequent when compared with Indo-European languages (they are rarer in Nez Perce than in Sahaptin). According to Rude (p.c.), although *pá-* occasionally appears on some nominalized forms, whatever meaning this prefix may retain is probably best treated as lexicalized.

The differences in marking in non-local scenarios is shown in Figure V-1:

Figure V-1
SAHAPTIAN VERBAL MARKING IN NON-LOCAL SCENARIOS

	Umatilla Sahaptin					Nez Perce	
O \ A	$3s^{HP}$	$3s^{LP}$	$3p^{HP}$	$3p^{LP}$		3s	3p
$3s^{HP}$		*pá-*		*patá-*		*pÉ-*	
$3s^{LP}$	*i-*		*pa-*				
3p	*i-*		*pa-*			*hi-*	*hi-(pE-)*

Summing up, person marking appears in Sahaptian clauses according to the following schemas (plural subject *pE-* and plural undergoer *nÉs-* have been neglected here):

(44) SAHAPTIAN PERSON HEAD-MARKING

a. SAHAPTIN
   - a_1) second-position clitic: SAP actant or SAP combination (1→2)
   - a_2) verbal prefix: 3rd person marker according to markedness and the GR hierarchy Subj > Obj:
     - *pá-/patá-* for the configurations 3^{LP}→$3s^{HP}$ and 2s→1s
     - *i-/pa-* 3S; 3A in all other 3→X configurations
     - *á-* 3O/E elsewhere

b. NEZ PERCE
   - b_1) second-position clitic: SAP actant or SAP combination (1→2)
   - b_2) verbal prefix: 3rd person marker according to markedness and the GR hierarchy Subj > Obj:
     - *pÉ-* for the configuration 3→3s
     - *hi-* 3S; 3A in all other 3→X configurations
     - *'E-* 3O elsewhere
   - b_3) verbal suffix: cislocative *-im* for the 2→1 configurations

It is risky to advance a hypothesis as to how such systems may have evolved without knowing more about the prehistory of Sahaptian. If the Nez Perce system was the original one, Umatilla Sahaptin has innovated in (i) turning a 3p→3s marker into a pragmatic direction marking, (ii) utilizing this very marker in the local scenario for the configuration 2s→1s, and (iii) adapting case marking in order to encode, among others, global direction. However, as seen in

§2.3 above, Nez Perce dependent marking appears to be the real innovation, and so the detached and head marking portions of this language could be younger as well—in which case Nez Perce would have lost the pragmatic direction system it once had.

Functional remarks à la Givón

Rude (1988) arrives at the conclusion that ordinary transitive clauses are the most frequent, and in this sense unmarked, way of portraying states of affairs where there are two entities are involved in Nez Perce (66% of all semantically transitive clauses). By contrast, detransitive constructions are used with inanimate and/or nontopical undergoers that need not be easily recovered from discourse (30% of all semantically transitive clauses). Finally, agentless passives are used quite sparingly in the texts he investigated (only 4% of all semantically transitive clauses).

Rude (1994) explores the function of different constructions in the Northwest, not the Umatilla, dialect of Sahaptin, but since the systems of both varieties are closer to each other than to the one found Nez Perce, it is probably not too far-fetched to accept his results as a working hypothesis for Sahaptin in general. Whereas actor-demoting passives are extremely infrequent in the texts surveyed by Rude (less than 1% of the clauses), the frequency of inverse constructions (under which Rude subsumes the 2s→1s, 3→SAP, and 3^{LP}→$3s^{HP}$ configurations) is extremely high: roughly 43% of all semantically transitive clauses; ordinary transitive direct clauses are used in roughly 57% of the clauses. Rude argues that the inverse is neither promotional nor demotional but undergoer-topicalizing, and the indices he computes (referential distance and topic persistence) support this claim.

Overview of Sahaptian direction

The direction systems displayed by Umatilla Sahaptin and Nez Perce can be summarized in the following terms:

- Both direct and inverse direction are expressed by means of ordinary transitive clauses without any role-remapping effects. The main syntactic functions of Sahaptian seem to be subject, primary object, and secondary object.
- Umatilla Sahaptin core low-focal direction is marked by means of an opposition in dependent marking. SAPs enclitics are unmarked for grammatical case, but 3rd person actors are *nim*-marked and 3rd person undergoers are *na*-marked in mixed scenarios. Whereas the suffix *-na* characterizes 3rd person primary objects in general, *-nim* as a core case marker ("inverse ergative") is reserved for the 3→SAP configuration. Nez

Perce does not show core direction, and *-n(i)m* is simply a generalized ergative marker.

- Non-local direction is limited to pragmatic direction with singular undergoers in Umatilla Sahaptin, and it is marked both on the dependent and on the head. In the direct construction, the actor is unmarked and the undergoer takes *-na*. In the inverse one, the undergoer is still *na*-marked but the actor appears in a special case with the suffix *-in* ("obviative ergative"). An otherwise unmarked verb occurring in the direct construction (more accurately, a verb marked for 3rd person undergoer with *á-*) stands in opposition to an inverse-marked verb with *pá-* or *patá-* (depending on whether the actor is singular or plural). There is no non-local direction in Nez Perce, and *pÉ-* is a specialized 3→3s marker.
- Local direction is present in both languages because 1→2 configurations are treated differently from 2→1 configurations by the morphology. The former are encoded by the specialized portmanteaus *=maš* '1s→2s' and *=mataš* '1→2R' in Umatilla Sahaptin and the compositional enclitics *=mex* '1s→2s' and *=pemex* '1→2R' in Nez Perce, the occurrence of the latter depending on the presence of certain particles and adverbs in the clause. 2→1 configurations are marked only for the actor (*=nam* and *=pam* in Umatilla Sahaptin and *=m* and *=pem* in Nez Perce for 2s and 2p, respectively)—with the notable exception of the 2s→1s configuration in Umatilla Sahaptin, which additionally marks the verb with *pá-*. In Nez Perce, 2→1 interactions are additionally marked with the cislocative *-im*, a LOCAL DIRECTION marker.
- The Umatilla Sahaptin verbal prefixes *pá-* and *patá-* can be meaningfully labeled SINGULAR and PLURAL ACTOR PRAGMATIC INVERSE, respectively, with the proviso that inversion occurs (i) only with a singular undergoer and (ii) also in one of the minimal local scenarios. Cognate *pÉ-* in Nez Perce is not an inverse prefix.

Chapter VI
Kiowa-Tanoan languages*

> Nature, with equal mind,
> sees all her sons at play,
> sees man control the wind,
> the wind sweep man away.
> — Matthew Arnold

After seeing how dependent-marking could be used in order to express inversion in Sahaptin, Tanoan languages shall illustrate double-marking patterns utilized in a full-fledged direction system that would draw a sharp dividing line between a clause like *man controls the wind* and one like *the wind sweeps man away*. While the question whether nature really shows an "equal mind" is open as far as modern western science is concerned, the answer to the question whether the grammars of some languages agree is rather simple. Moreover, the fairly complex language called Kiowa will teach us that the fundamental distinction between speech act participants and 3rd persons can be at the center of attention in a fascinating way.

The names of the Tanoan languages come in a colorful ablaut-like series: Tiwa, Tewa, and Towa. Tiwa languages belong either to a northern (the Taos and Picurís languages) or a southern branch (the Isleta and Sandía dialects of Southern Tiwa). Tewa is spoken in several pueblos along the Rio Grande both in New Mexico and Arizona, and the Towa speakers live in Jemez, 45 miles northwest of Albuquerque, New Mexico. Whereas Kiowa, a language currently spoken in Oklahoma, was soon recognized to be related to Tanoan, a more distant relationship between Kiowa-Tanoan and Uto-Aztecan is still controversial. Kroskrity (1985) proposed to use the label Tanoan in order to cover not only the Tiwa, Tewa, and Towa languages but also Kiowa, but I have followed mainstream terminology here in not including the latter language when using the term Tanoan. See Campbell (1997: 138f) and Mithun (1999: 441f) for more details.

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* Approximate figures for the number of speakers of Kiowa-Tanoan according to censuses or estimates are the following: Tewa 1,300 (Ethonologue), Taos 800, Picurís 100 (1990), Isleta Tiwa 1,600 (1980), Sandía Tiwa 40 (1990), Towa 1,300 (1990), and Kiowa 1,100 (1990).

1. Klaiman's (1991, 1992) view of Tanoan

1.1 Arizona Tewa

I follow Klaiman (1991: 204f) in concentrating on some selected forms of the Arizona Tewa verb, viz. the animate intransitive and the transitive animate, and in disregarding the reflexive, possessive, imperative, transitive inanimate, and ditransitive paradigms. The relevant personal prefixes are shown in Table VI-1:

TABLE VI-1
ARIZONA TEWA PERSON PREFIXES (SELECTION)

	1s	1d	1p	2s	2d	2p	3s	3d	3p
Set I	ʼo-	ga-	gi-	ʼụ-	da-	ʼi-	na-	da-	di-
Set II	dó-	ʼán-	ʼíː-	náː-	den-	ʼobíːn-	mán-	den-	dí-
Set III									
▪1→2					← wí- →				
▪2→1		← dí- →							
▪3→X		← dí- →		wóː-	wóːbén-	wóːbé-	ʼóː-	ʼóːbén-	ʼóːbé-

Klaiman (1991: 205), from Kroskrity (1985)

The prefixes of these three sets are mutually exclusive. Set I prefixes are used in intransitive predications, those of Set II are used in monotransitive predications whenever a 3rd person is acted upon, and Set III prefixes are the ones occurring with SAP undergoers or in 3"→3' configurations. The sentences in (1) below illustrate this opposition.

(1) ARIZONA TEWA SETS II AND III PREFIXES (Klaiman 1991:204f, Kroskrity 1985:309,311)

MIXED SCENARIOS

a. Nɛ́ʼi kʷiyó **dó**-tay.
this woman 1sII-know
'I know this woman.'

b. Hę́ʼi sen-di ʼụ **wóː**-kʰɛgen-ʼán.
that man-OBL 2s 2sIII-help-COMPL
'That man helped you$_s$.'

LOCAL SCENARIOS

c. Ụ naːn-di **wí**-tay.
2s 1p-OBL 1→2III-know
'We$_p$ know / recognize you$_s$.'

d. Naː ʼų-di **dí**-k^{w}ek^{hw}ɻ́di.
1s 2s-OBL 2→1III-shoot
‘You$_{s}$ shot me.’

NON-LOCAL SCENARIOS

e. Hę́ʼi sen né́ʼi ʼenú **mán**-k^{hw}ɻ́di.
that man this boy 3sII-hit
‘That man$_{prox}$ hit this boy$_{obv}$.’

f. Né́ʼi ʼenú hę́ʼi sen-di **ʼóː**-k^{hw}ɻ́di.
this boy that man-OBL 3sIII-hit
‘That man$_{obv}$ hit this boy$_{prox}$.’

Several points are noteworthy in these examples. First, Set III prefixes cooccur with an oblique marker *-di* on the NP that corresponds to the actor.[1] Second, this requirement is independent of the status of the actor NP: it may be pronominal (c, d) or lexical (b, e, f), and it may even be 1st (c) or 2nd (d) person. Third, when SAPs are undergoers the picture differs from the SAP→X configurations. Whereas 2/3↔3 interactions are marked in such a way as to distinguish number of both actor and undergoer, 1↔3 and 1↔2 interactions are not. 2→1 and 3→1 configurations are indistinctly marked by a prefix *dí-* and are disambiguated by external pronouns (d). Interestingly enough, 1→2 configurations display a prefix of their own: *wí-* (c).

With regard to the first of these issues, it is important that the nominal marking can have a variety of related functions:

(2) ARIZONA TEWA *-di* (Kroskrity 1985:316, Kroskrity 1978:25)

a. Hę́ʼi ʼenú ʼayú p^{h}é-**dí** mán-k^{hw}ɻ́di.
that boy girl stick-DI 3sII-hit
‘That boy hit the girl with a stick.’

b. Naː kʼuː-ʼíʼí-**dí** dó-kʼege-ʼan.
1s rock-there-DI 1sII-build-PT
‘I built the house out of rock.’

c. Naːbah-ʼíʼí-**dí** ʼo-mɛ.
field-there-DI 1sI-go
‘I went from the field.’

In (a), *-di* apparently encodes instrumental case, whereas in (c) it is an ablative marker, and in (b) it is not entirely clear what the best gloss is. Be that as it

[1] The suffix *-di* takes the tone of the preceding syllable (Kroskrity 1985: 314).

may, *-di* is certainly not an unusual candidate for the kind of oblique marking one would expect if those clauses in (1) in which it appears were analyzed as passives—in fact, older accounts of Tanoan languages have adopted this view, as we shall see further down. Let me consider the evidence presented by Klaiman in support of her claim that Arizona Tewa Set III prefixes encode inverse and not passive in what follows.

As already mentioned, intransitive verb forms take prefixes from Set I. Detransitivized verbs behave exactly like this and additionally take a detransitivizing suffix *-tíː*:

(3) ARIZONA TEWA INTRANSITIVES I (Kroskrity 1985:309,314)

a. Naːm-bí sayáː ʼenú **mán**-ʼowídi.
1p-GEN grandmother boy 3sII-bathed
‘Our grandmother bathed the boy.’

b. ʼEː-pʼupʼíːle **na**-ʼowídi-**tíː**.
child-newborn 3sI-bathed-DETR
‘The newborn child was bathed.’

c. Walabi-ʼíʼí-dí **na**-mɛ.
Walpi-there-OBL 3sI-go
‘He went from Walpi.’

These are the examples given by Klaiman (1991: 209) in order to show that forms like those in (1) are not detransitivized despite the oblique marking on the nominal, and that therefore they are not passives.

Incidentally note in this context that these detransitivized *tíː*-constructions may cooccur with *di*-marked nominals if the latter are not understood as agents but as instruments:

(4) ARIZONA TEWA INTRANSITIVES II (Kroskrity 1985:310)

a. Naːbí ciyó-dí hęʼi tú na-cʼáːla-tíː.
1s-GEN knife-OBL that meat 3sI-cut-DETR
‘The meat was cut with my knife.’

b. *Hęʼi sen-di hęʼi tú na-cʼáːla-tíː.
that man-OBL that meat 3sI-cut-DETR
Intended: ‘The meat was cut by that man.’

A final word on *-di* is in order here. In her 1989 article, Klaiman tentatively suggests the label “quasi-obviative” (p. 268) for the use of *-di* as oblique and the analogous elements in other Tanoan languages discussed further down. This

quasi-obviative is an instance of what she calls "restricted case marking" in her 1991 book, which is "a strategy of assigning case (oblique marking) to certain core nominals (specifically, inverse logical subjects)" (p. 201). Moreover, Klaiman says that the system found in Arizona Tewa "and other systems of this inverse subtype have one special feature, the assignment of case to inverse logical subjects. We propose to relate this feature to [the language's] lack of an obviative person category" (1991: 208). We shall see Section 3 in Chapter VII on Mapudungun, however, that the lack of an overtly marked obviative is not a sufficient condition for the assignment of overtly marked case to A's in inverse constructions—nor, for that matter, for the existence of case marking at all.

Let me now turn to the third noteworthy issue mentioned above, viz. the somewhat different status of the local scenarios. Klaiman's analysis regards local interactions as inverse because the *-di* suffix appears on external nominals. In other words, since she does not rank the 1st and 2nd persons relative to each other, only SAP→3 configurations are direct, and inverse is characterized as the "elsewhere" case, i.e. 3→SAP and SAP→SAP. To be sure, non-local scenarios can be either direct (3'→3") or inverse (3"→3'), but the issue here is the asymmetry between the different local scenarios. The prefix *dí-* marks both 2→1 and 3→1 interactions and is therefore a non-focal or unrestricted direction marker, comparable to Proto-Algonquian **-i* in conjunct forms and to Quechua *-wa:* it simply marks 1st person undergoers.[2] By contrast, *wí-* is more specific in that it encodes only 1→2 configurations.

The shapes of the prefixes do not allow conclusive generalizations, but it is difficult to ignore the fact that there is a recurring *u/w* element in some 2nd person forms. In particular, 3→2 and 3→3 Set III forms are distinguished only by a *w* element that appears in the former but not in the latter. In an alternative analysis, 2nd person undergoers would be encoded by *w-* and 3rd person undergoers by Ø-. 3rd person actors would be marked by *'ó:-*, with additional number specification for non-sigular *-bé-* and dual *-n-*. 1st person undergoer *d-* would not be problematic if it were not for the apparent lack of a 1st or 2nd person actor marking, since *-í-* cannot possibly be postulated as 1st person actor marker, nor as an SAP actor that would be non-coreferential with the undergoer by default. Furthermore, none of these tentative formants seems to appear in a compatible function in Sets I and II prefixes, with the exception of an element *n* in the dual forms of Set II. Therefore, I have preferred to follow the specialists here in treating all prefixes as portmanteaus.

[2] Note that I am glossing over the homophony of this prefix with the 3p→3 marker here.

1.2 Picurís

The situation in Picurís differs from what we have seen in Arizona Tewa in three important respects. First, despite the obvious lexical similarity between both languages, the personal prefixes appearing on verbs are quite different regarding both form and functional yield. Second, the inverse forms occur with marked nominals as in Arizona Tewa (in Picurís the case marker is *-pa*), but the verb takes a suffix *-mia*. Third, there is neither oblique case marking nor *mia*-marking in local scenarios—in other words, they are direct. The relevant person prefixes are depicted in Table VI-2.

TABLE VI-2
PICURÍS PERSON PREFIXES (SELECTION)

	1s	1d	1p	2s	2d	2p	3s	3d	3p
Set I	ta-	’ąn-	’i-	’a-	mąn-	mą-	Ø-	’ąn-	’i-
Set II									
▪ A	ti-	’ąn-	’i-	’a-	mąn-	mą-	Ø-	’ąn-	’i-
▪ B	pi-	pąn-	pi-	’i-	pąn-	pi-	’i-	pąn-	pi-
▪ C	ta-	ko-	’o-	kąm-	mąm-	’ąm-	ku-	mu-	’u-

Klaiman (1991: 216), from Zaharlick (1982)

First consider the prefixes from Set I exemplified in (5). With intransitive verbs like *me-* ‘go’, these are the prefixes used.

(5) PICURÍS SET I PERSON PREFIXES (Klaiman 1991:215f)

a. **Ta**-me-’ąn.
1sI-go-PT
‘I went.’

b. **’A**-me-’ąn.
2sI-go-PT
‘You$_s$ went.’

c. **Ø**-Me-’ąn.
3sI-go-PT
‘She went.’[3]

With monotransitive predications, Set II markers distinguish three categories (labeled A, B, and C here), depending basically on number and animacy of the undergoer.[4] Person prefixes from Set IIA, which is the one used with singular animate undergoers, are illustrated in (6) below.

[3] Feminine forms are used in the default English translations in this study, although both genders are represented by the same forms in Kiowa-Tanoan.

[4] Tanoanists distinguish between three nominal classes i, ii and iii, the former corresponding to animates and the latter two to subclasses of inanimates. Thus, the Set II prefixes in Picurís and Southern Tiwa are distributed as follows: A for singular i and singular ii; B for plural i and singular iii, and C for plural ii and plural iii. Cf. Klaiman (1991: 292) and Allen et al. (1990) for more details.

(6) PICURÍS CLAUSES WITH TWO ARGUMENTS (Klaiman 1991:215f)

a.	Sənene **ti**-mǫn-’ąn.	**Ta**-mǫn-**mia**-’ąn sənene-**pa**.
	man 1sII-see-PT	1sI-see-MIA-PT man-OBL
	‘I saw the man.’	‘The man saw me.’
b.	Sənene **’a**-mǫn-’ąn.	**’A**-mǫn-**mia**-’ąn sənene-**pa**.
	man 2sII-see-PT	2sI-see-MIA-PT man-OBL
	‘You$_s$ saw the man.’	‘The man saw you$_s$.’
c.	Sənene **Ø**-mǫn-’ąn.	**Ø**-Mǫn-**mia**-’ąn sənene-**pa**.
	man 3sII-see-PT	3sI-see-MIA-PT man-OBL
	‘She saw the man.’	‘The man saw her.’

Observe how X→3 configurations take Set IIA prefixes without additional marking, neither verbal nor nominal. By contrast, 3→X interactions require Set I prefixes and the *-mia* suffix on the verb and the oblique *-pa* on the external NP.

Unlike Arizona Tewa, Picurís does not distinguish between person prefixes used in intransitive predications and those used in transitives of the A type illustrated in (6) above, with the notable exception of 1st person markers. Because of this, Klaiman (1991: 218) considers the two sets to be actually one, with the exception of a specialized 1st person undergoer marker *ti-*. In other words, Klaiman postulates personal prefixes that are neutral as to form and convey all three functions S, A, and O (like what is customarily postulated for the Algonquian verbal prefixes, see Chapter III). Thus, the information of who acts upon whom is conveyed by the inverse marking *-mia* on the verb and the oblique *-pa* on the actor NP.

By construing a person marking system parallel to that of Algonquian languages, Klaiman attempts to weaken the plausibility of a passive account of the Picurís forms on the right-hand side in (6). The latter analysis is even more plausible for Picurís than for Arizona Tewa because (i) there does not appear to be a detransitivizing agentless passive like the Arizona Tewa *tí:*-form and (ii) Sets I and IIA are distinguished by the different 1st person prefixes *ta-* and *ti-*.

1.3 Southern Tiwa

The situation in Southern Tiwa is parallel to the one just sketched for Picurís. Set I prefixes appear on intransitive verbs, and transitive predications with animate undergoers take Set IIA markers. The prefixes are shown in Table VI-3 and the relevant examples are given in (7) and (8) below.

TABLE VI-3
SOUTHERN TIWA PERSON PREFIXES (SELECTION)

	1s	1d	1p	2s	2d	2p	3s	3d	3p
Set I	te-	in-	i-	a-	men-	ma-	Ø-	in-	i-
Set II									
▪ A	ti-	in-	i-	a-	men-	ma-	Ø-	in-	i-
▪ B	bi-	imim-	ibi-	i-	mimim-	bibi-	i-	imim-	ibi-
▪ C	te-	kin-	kiw-	ku-	men-	mow-	u-	in-	iw-

Rosen (1990: 673)

(7) SOUTHERN TIWA SET I PERSON PREFIXES (Klaiman 1991:219f)

a. **Te**-mį-ban.
1sI-go-PT
'I went.'

b. **A**-mį-ban.
2sI-go-PT
'You$_s$ went.'

c. **Ø**-Mį-ban.
3sI-go-PT
'She went.'

(8) SOUTHERN TIWA CLAUSES WITH TWO ARGUMENTS (Klaiman 1991:219f)

a. Seuan-ide **ti**-mų-ban.
man-s 1sIIA-see-PT
'I saw the man.'

Seuan-ide-**ba** **te**-mų-**che**-ban.
man-s-OBL 1sI-see-CHE-PT
'The man saw me.'

b. Seuan-ide **a**-mų-ban.
man-s 2sIIA-see-PT
'You$_s$ saw the man.'

Seuan-ide-**ba** **a**-mų-**che**-ban.
man-s-OBL 2sI-see-CHE-PT
'The man saw you$_s$.'

c. Seuan-ide **Ø**-mų-ban.
man-s 3sIIA-see-PT
'She saw the man.'

Seuan-ide-**ba** **Ø**-mų-**che**-ban.
man-s-OBL 3sI-see-CHE-PT
'The man saw her.'

Like their Picurís counterparts, Southern Tiwa transitive predications distinguish the X→3 configurations (Set IIA prefixes, no additional marking) from the 3→X ones (Set I prefixes, a suffix *-che* on the verb and an oblique marker *-ba* on the external NP). Again, Sets I and IIA are identical with the exception of the 1st person markers *te-* and *ti-*.

Now consider the prefixes covering local interactions given in (9):

(9) SOUTHERN TIWA LOCAL SCENARIO PREFIXES (Rosen 1990:673)

a. 2→1s *bey-* 2→1p *ku-*
b. 1→2s *i-* 1→2d *men-* 1→2p *ma-*

Observe that these local scenarios are direct in Southern Tiwa, as shown in (10):

(10) SOUTHERN TIWA LOCAL SCENARIOS (Rosen 1990:698)

a. **Bey**-mų-ban. (*I-ba te-mų-che-ban.)
2→1s-see-PT 2s-OBL 1sI-see-CHE-PT
'You$_s$ saw me.'

b. **I**-mų-ban. (*Na-ba a-mų-che-ban.)
1→2s-see-PT 1s-OBL 2sI-see-CHE-PT
'I saw you$_s$.'

Whereas both local scenarios are inverse in Arizona Tewa (cf. the examples in (2) above), inverse counterparts to the clauses in (10) are ungrammatical.

1.4 Jemez

I have not had access to Klaiman's (1991) source for Jemez (Myers 1970), but even her own account of this language is extremely cursory. Note that Jemez does not distinguish A, B and C forms of Set II prefixes like the Tiwa languages discussed above, and that Set II in Table VI-4 corresponds to Set IIA in Tiwa.

TABLE VI-4
JEMEZ PERSON PREFIXES (SELECTION)

	1s	1d	1p	2s	2d	2p	3s	3d	3p
Set I	u-	į-	e-	ą-	mǫ-	ba-	Ø-	ɨ̄-	e-
Set II	u-	į-	e-	ą-	mą-	ba-	Ø-	į-	e-

Klaiman (1991: 221), from Myers (1970)

Again, Set I forms are used with intransitives and Set II prefixes with transitive animates in X→3 configurations. Observe that, unlike in Tiwa, 1st person markers are identical (*u-*) but non-1st person dual prefixes differ (*mǫ-* and *mą-* for 2nd person, *ɨ̄-* and *į-* for 3rd person).

1.5 Further Tanoan constructions

Klaiman says that "there does seem to be evidence that in systems of this kind, derived [i.e. valence-changing and role-remapping, FZ] voices coexist with a basically inverse pattern of organization" (1991: 224). In order to better understand this claim, let me start off by considering some further personal prefixes found in Southern Tiwa, viz. Set III ("ditransitive", also found in Picurís) and Set IV ("intransitive with dative"). The prefixes are given in Tables VI-5 and VI-6 below, and their use is exemplified in (11):

Table VI-5
SOUTHERN TIWA SET III PREFIXES (SELECTION)

	Class of 3rd person theme		
	A	B	C
1→2s	ka-	kam-	kow-
1→2d	mim-	mim-	miw-
1→2p	mam-	mam-	mow-
2s→1s	ben-	bem-	bow-
2d→1s	men-	mem-	mow-
1s→A	ta-	tam-	tow-
2s→A	a-	am-	ow-

Rosen (1990: 673)

Table VI-6
SOUTHERN TIWA SET IV PREFIXES

	1s	1d	1p	2s	2d	2p	3s	3d	3p
A	in-	ki(m)-	ki-	ka-	bim-	mam-	a-	im-	im-
B	im-	kim-	kim-	kam-	bim-	mam-	am-	im-	im(im)-
C	iw-	kiw-	kiw-	kow-	biw-	mow-	ow-	iw-	iw-

Rosen (1990: 674)

(11) SOUTHERN TIWA SETS III AND IV PREFIXES I (Allen & Frantz 1986:389, 398)

a. **Ti**-khwien-wia-ban ’i-**’ay**. **Ka**-khwien-wia-ban.
1sIIA-dog-give-PT 2s-to 1→2s(A)III-dog-give-PT
Both: ‘I gave you$_s$ the dog.’

b. Seuan-ide **Ø**-wan-ban na-**’ay**. **In**-seuan-wan-ban.
man-sanim 3sI-come-PT 1s-to 1s(A)IV-man-come-PT
Both: ‘The man came to me.’

The conditions governing nominal incorporation are rather complex and cannot be addressed at this point; the interested reader should consult Rosen’s study (1990). Suffice it to say here that both verbs like *khwien-wia-* ‘give a/the dog’ and *wan-* ‘come’, which take Set I prefixes, can appear like in (11), i.e. with the goal externally marked via *-’ay* (left-hand side) or with the goal encoded in the prefix (right-hand side).

Now consider the alternations in (12) below. In (a_1), *liorade* ‘the lady’ is the actor in a direct construction with the 1st person as external goal (*na’ay* ‘to me’), while (a_2) shows an inverse construction in which the actor appears marked as oblique (*liorade-ba*) and the verb takes *-che* and a Set IV prefix coding the 1st person goal (*in-*). Whereas in (a), a 3s→1s(A) interaction, an NP-

ba + V-*che* construction is possible, in (b), a 1s→3s(A) configuration, such an option is ungrammatical.

(12) SOUTHERN TIWA SETS III AND IV PREFIXES II

a$_1$. Liora-de **Ø**-khwien-wia-ban na-'ay.
lady-s 3sII-dog-give-PT 1s-to
a$_2$. Liora-de-**ba** **in**-khwien-wia-**che**-ban.
lady-s-OBL 1s(A)IV-dog-give-CHE-PT
Both: 'The lady gave a dog to me.' (Allen & Frantz 1978:14)

b$_1$. **Ta**-khwien-wia-ban.
1s→3(A)III-dog-give-PT
b$_2$. ***A**-khwien-wia-**che**-ban na-**ba**.
3s(A)IV-dog-give-CHE-PT 1s-OBL
Both (b$_2$ intended): 'I gave her a dog.' (Allen & Frantz 1986:401)

Klaiman concludes from the above that "Tiwa languages host more than one type of voice. […] It appears that in some Tanoan languages […] derived voice processes may coexist with a basic pattern which is direct-inverse" (1991: 224f). The next section takes a closer look at both this claim and a number of other points mentioned above. In particular, I argue that the question of passive versus inverse cannot be answered adequately by addressing only the valence of the constructions involved, and that further factors have to be taken into account.

2. A second opinion on Tanoan

The issues raised by Klaiman's account in Section 1 above are numerous, but I shall concentrate on the most relevant ones for the purposes at hand. I will first briefly mention some more comparative data provided by Kroskrity (1985) in order to better understand the status of the constructions addressed above (Section 2), and then proceed to characterize the Tanoan direction systems along the lines proposed in this study (Section 3). Since the Jemez data available to me are so scarce, I will concentrate on Tewa and Tiwa.

Some differences between the two varieties of Tewa are noteworthy for our present purposes. In Rio Grande Tewa, the oblique suffix *-ři* differs in its distribution from Arizona Tewa *-di* in that also SAP→3 configurations require it, as shown in (13) below.

(13) RIO GRANDE TEWA *-ři* (Kroskrity 1985:319f)

a. Naː-**ři** wí cé ró-c'â'.
1s-OBL INDEF dog 1sII-cut
'I cut a dog.'

b. 'Ų-**ři** 'i sen nâː-mû'.
2s-OBL ART man 2sII-see
'You$_s$ saw the man.'

c. 'I sen 'i 'e'nú 'i-mû'.
ART man ART boy 3sII-see
'The man saw the boy.'

d. 'I pu'-eː-**ři** páːřéːbo 'óː-mû' p'óséxwâː se'dó.
ART rabbit-DIM-OBL first 3sIII-see coyote old.man
'The little rabbit saw Old Man Coyote first.'

In Arizona Tewa mixed scenarios, only 3→SAP interactions trigger a different set of verb markers and the oblique *-di* on the A nominal, but (a) and (b) above show that the *ři*-marking shows up in Rio Grande Tewa even in SAP→3 configurations. In non-local scenarios, both the alternation in verb prefixes and the nominal marking are parallel to the situation in Arizona Tewa. (Observe that the cognate sets for the above examples are AT *dó-* RGT *ró-* '1sII', AT *náː-* RGT *nâː-* '2sII' and AT *'óː-* RGT *'óː-* '3sIII'. RGT *'i-* is cognate with AT *'i-* '3sREFL', and there is no prefix cognate with AT *mán-* '3sII'.) In Kroskrity's view, these data suggest "an elaboration of *-ři* into more of an agentive or ergative marker than AT *-di*" (1985:320), but he nonetheless characterizes the inherited function of these elements in Tanoan as that of an oblique.

Further relevant differences between the Tewa varieties are related to verb morphology. First, while Arizona Tewa *wí-* '1→2' is fairly general, Rio Grande Tewa *wí-* shows a more specific meaning '1→2s' and stands in opposition to *wɛ̂n-* '1→2d' and *wêː-* '1→2p'. According to Kroskrity (1985: 313), it seems that it was Arizona Tewa that innovated here. Second, the detransitivizing suffix in Rio Grande Tewa is *-n* instead of *-tíː*. In fact, Arizona Tewa shows three different detransitivizing suffixes *-tíː*, *-n* and *-muː*, all of which can be seen in (14) below:

(14) TEWA DETRANSITIVE CLAUSES (Kroskrity 1985:310,320)

ARIZONA TEWA DETRANSITIVES

a. Hę'i tú na-c'áːla-**tíː.** — Hę'i tú na-c'áːla-**n**.
that meat 3sI-cut-DETR that meat 3sI-cut-DETR
Both: 'The meat was / has been cut.'

b. Hę'i tú na-c'á:la-**mu:**.
that meat 3sI-cut-DETR
'The meat is cut.'

RIO GRANDE TEWA DETRANSITIVE

c. Na-xa've-**n**.
3sI-break-DETR
'It is broken.'

All of the above leads to Kroskrity's analysis of Tanoan morphosyntax, which differs from Klaiman's in at least one important respect. Kroskrity labels the three Arizona Tewa prefix sets "stative", "active", and "passive", but note that his definition of passive is functional rather than structural. Although "passives are vehicles for enabling non-agent arguments to assume subject-like properties typically reserved for the agent" (1985: 307), he unmistakably states that he does not claim the Arizona Tewa *-di* + Set III construction to be a traditional or prototypical passive. Kroskrity distinguishes this construction ("semantic passive") from the *tí:*-construction ("impersonal passive") because the latter precludes the actor from appearing as an overt NP in the clause.

In addition, Kroskrity briefly sketches a comparison between the different Tanoan constructions. The Southern Tiwa NP-*ba* + [I]-∑-*che* construction (where [I] represents the choice of Set I prefixes and ∑ the verbal stem) is closer to the prototypical passive than the Arizona Tewa NP-*di* + [III]-∑-*Ø* construction—actually, quite close to the Arizona Tewa [I]-∑-*tí:* construction. Also the Jemez NP-*tæ̨* [I]-∑-*æ̨* construction is closer to an impersonal than to a semantic passive in Kroskrity's view. He also points out that only the Arizona Tewa Set III prefixes represent both the A and the O, the Southern Tiwa and Jemez passives allowing only undergoers to be represented by prefixes on the verb. Kroskrity acknowledges that "all the Tanoan languages mentioned so far display a version of the animacy hierarchy" (1985: 321), which is what determines the choice between "active" and "(semantic) passive" constructions.

Finally, consider Kroskrity's important findings as to word order patterns in Arizona Tewa. Active sentences have a rather rigid AOV order, while passives can have either AOV or OAV. However, observe the examples in (15) below:

(15) ARIZONA TEWA WORD ORDER PATTERNS I (Kroskrity 1985:315f)

a_1.	*Nɛ́'i	p'o	hę'i	sen-di	'ó:-sun.
	this	water	that	man-OBL	3sIII-drink
a_2.	Hę'i	sen	nɛ́'i	p'o	mán-sun.
	that	man	this	water	3sII-drink

Both (a_1 intended): 'That man drank this water.'

b_1.	*To꞉wi	k^hɛn	nɛ́’i	cé’é	mán-khu̱꞉n.
	some	bobcat	this	dog	3sII-bit
b_2.	Nɛ́’i	cé’é	to꞉wi	k^hɛn-di	’ó꞉-khu̱꞉n.
	this	dog	some	bobcat-OBL	3sIII-bit

Both (b_1 intended): ‘This dog was bitten by some bobcat.’

These data remind one of the famous Navajo alternations (cf. Hale 1973a), and rightly so; whether the decisive factor is animacy (a) or definiteness (b), the relative order of NPs (and, consequently, the verb morphology) is far from free.

Nevertheless, it is not word order that depends on the asymmetry in topic-worthiness but grammatical relations, the subject function being reserved for the topic-worthiest argument. In other words, the indexability hierarchy SAP > animate > inanimate > definite > indefinite governs the access to the grammatical relations subject > object (Kroskrity 1985: 315). It follows from this that a 3rd person can only be subject if there is no SAP argument, and that there may be a semantic / grammatical competition between NPs if it is not discourse alone that decides which actant is the primary argument.

That the restriction is not simply upon lower 3rd persons being clause-initial can be seen from (16) below:

(16) ARIZONA TEWA WORD ORDER PATTERNS II (Kroskrity 1985:316f)

a.	*Nan	p^hę́꞉-mele	mán-há꞉bé꞉.	
	sand	stick-vessel	3sII-break	
b.	Nan-di	p^hę́꞉-mele	’ó꞉-há꞉bé꞉.	
	sand-OBL	stick-vessel	3sIII-break	

Both (a intended): ‘The crate was crushed by the sand.’

Since both NPs are indefinite and inanimate, there should be no preferred option in (16). Although ethnographic research has repeatedly suggested that kinetic potential has much to do with animacy in diverse cultures of the Southwest, it is the old wooden crate in this particular agricultural context that has been become animate-like, and therefore it is the preferred subject and (a) is ungrammatical. Crucially, the higher argument need not be clause-initial (word order is identical in a and b); it has to be the subject.

Further consider interrogative sentences like those in (17):

(17) ARIZONA TEWA INTERROGATIVE SENTENCES (Kroskrity 1985:317)

a.	To꞉wán	mán-mun?	vs.	To꞉wán	’ó꞉-mun?	
	who	3sII-see		who	3sIII-see	
	‘Who saw her?’			‘Who was seen?’		

b. To꞉dán ’ó꞉-mun?
who꞉OBL 3sIII-see
‘Who was she seen by?’

The same interrogative *to꞉wán* ‘who’ that is used in intransitive predications is used in both sentences in (a), but in order to inquire about the actor in (b) a different interrogative *to꞉dán* ‘by whom’ has to be used. This clearly suggests that there is role-remapping taking place between direct and inverse clauses, but it does not mean that the latter are simply intransitive passives.

3. Tanoan direction systems

The above amounts to saying that, roughly, Klaiman claims some Tanoan constructions to be inverses rather than passives because they are not clearly intransitive, whereas Kroskrity labels the same constructions passives—more accurately, semantic passives. The latter author is not primarily concerned with transitivity but what he sees as the function of passivization, viz. topicalization of the undergoer. As seen in Chapter II, the present study postulates that a given construction may be inverse and passive at the same time, the former being a deictic value (direction) and the latter a role-remapping and/or valence-changing operation (voice). Alternatively, it may be the case that a given construction does not alter valence but nevertheless remaps macroroles onto syntactic functions. These options are addressed in this section.

3.1 Functional aspects of Tanoan direction

First, a major claim of Klaiman’s is worth repeating here: local scenarios are treated differently in Tewa and in Tiwa. While the former apparently groups 1↔2 interactions together with 3→X configurations, Tiwa treats them like X→3 configurations. The importance of this point is that, irrespective of the framework used in order to characterize direction, it shows that it is more useful to regard such variation as parametrical than as definitional. In a strictly privative definition (see Chapter II), by contrast, one or both of the 1↔2 interactions should be inverse because only those where actors strictly outrank undergoers on the indexability hierarchy are direct. Further recall that Arizona Tewa has fewer local scenario markers than Rio Grande Tewa. The former displays merely *wí-* ‘1→2’ and *dí-* ‘1O’ while the latter displays *wí-* ‘1→2s’, *wə̂n-* ‘1→2d’ and *wə̂꞉-* ‘1→2p’ in addition to the 1st person undergoer marker.

All these things considered, focality and domains of Tanoan direction may be summarized as in Table VI-7 below:

Table VI-7
TANOAN DIRECTION SYSTEMS I

	Tewa		Tiwa	
	Arizona	Rio Grande	Picurís	Southern
SAP→3	← high-focal DIR →			
3'→3"	← high-focal DIR →			
1→2	low-focal INV	high-focal INV	← high-focal DIR →	
2→1	← non-focal INV →		← high-focal DIR →	
3→1			← high-focal INV →	
3→2	← high-focal INV →		← high-focal INV →	
3"→3'	← high-focal INV →			

In other words, there is core direction in all languages, contrasting a high-focal direct construction with an either high-focal or non-focal inverse one. There is high-focal non-local direction, which apparently works pragmatically when both arguments are equally animate and/or definite but may also work along these latter parameters. Local direction is present in all languages but distinguishes the two Tewa varieties from each other (the 1→2 scenarios show high-focal direction in Rio Grande tewa but a low-focal marker in Arizona Tewa), and Tewa in general (where all local scenarios are inverse) from the Tiwa languages (where all local scenarios are direct).

3.2 Formal aspects of Tanoan direction

Marking

The affix status of the verbal personal markers in all these languages is not controversial, so I have followed Tanoanists in considering them prefixes. The oblique markers may be treated rather like adpositions or particles, but at any rate they are adnominal elements; I have followed recent studies in treating them like suffixes. Even if some of them are better thought of as enclitics or postpositions, the fact remains that they constitute a dependent-marking device.

Summing up, direction is expressed by double-marking patterns in Tanoan. Whereas direct is encoded by the personal prefixes alone, inverse is expressed both by (i) the personal prefixes and a suffix on the verb (except in Tewa, where the suffix is missing) and (ii) an oblique element attached to the actor nominal. This is schematically shown in Table VI-8.

Table VI-8
TANOAN DIRECTION SYSTEMS II

	Tewa		Tiwa	
	Arizona	Rio Grande	Picurís	Southern
direct	← $[II]_A$ →		← $[II]_A$ →	
inverse	← $[III]_O$ + NP-*di* →		$[I]_O$-Σ-*mia* + NP-*pa*	$[I]_O$-Σ-*che* + NP-*ba*

Grammatical relations and voice

The relationship between direction marking and voice may be more complex than it appears, but due to the scarce data I cannot be conclusive on this issue. The morphological evidence supports a passive analysis for Tiwa inverse constructions since (i) the prefix set is the same used for intransitive predications and (ii) actor nominals take an oblique marking, both features clearly recalling prototypical passivization. Little can be said without the syntactic tests needed in order to shed more light on the question of grammatical relations, but the undergoer of inverse constructions appears to be the primary argument in all languages—which is compatible with both a transitive remapping account and an intransitive passive analysis.

In Arizona Tewa, the morphological and syntactic evidence available to me suggests that role remapping takes place between direct and inverse clauses. There is a primary argument controlling verbal marking; it distinguishes person and number, and is encoded by a prefix from Set I, II, or III. If it is an NP, it occurs unmarked. Whereas passive constructions appear to be syntactically intransitive in that only the undergoer is allowed to appear as core argument, inverse clauses seem to be syntactically transitive in that both arguments are still part of the clause, even though the actor appears admittedly demoted.

Klaiman is at pains to show that a passive analysis of what she calls inverse constructions in Arizona Tewa is to be avoided, but hers is evidence against a detransitivizing passive at best. Morphology alone does not guarantee that Set III forms are not remapping inverses like those postulated by some scholars for Algonquian (Chapter III) and Mapudungun (Chapter VII). The evidence in support of an non-passive account of the Tiwa constructions is even weaker considering (i) the lack of detransitivizing morphology parallel to the one found in Tewa, (ii) the additional marking on the verb (*-mia* in Picurís, *-che* in Southern Tiwa) and (iii) the incomplete identity of the intransitive and the singular animate X→3 prefix sets. The paradigms from Jemez show, if anything, that it is probably best not to treat the difference in 1st person markers in Tiwa as an exception.

More research is needed in order to evaluate the hypotheses that appear to be supported by the data discussed here, viz. (i) that Tewa inverse clauses are syntactically transitive and (ii) that Tiwa inverse clauses are syntactically

intransitive. What seems to be a better conclusion, however, is that Tanoan inverse clauses remap grammatical relations when compared to direct clauses.

4. Watkins & McKenzie's (1984) view of Kiowa

Tanoanists have repeatedly pointed out that Towa appears to be as divergent from the other Tanoan langauges as Kiowa. However, Kiowa morphology is, in many respects, substantially more complex than what the preceding sections sketched for the Tanoan languages. This section outlines some essentials of Kiowa nominal and verbal morphology, clause structure, and switch-reference following Watkins & McKenzie (1984).

4.1 Kiowa nominal number

Number is marked on nominals in an intricate system distinguishing inherent number (unmarked) from what Watkins & McKenzie call complementary number or inverse (marked by the suffix *-gɔ́* or one of its many allomorphs)—it goes without saying that I use the former label for the non-inherent category in the present study in order to avoid serious misunderstandings. Thus, Kiowa distinguishes singular, dual, plural, and complementary numbers (abbreviated here as s, d, p, and c, respectively) and, roughly, four noun classes I label here A through D.[5] All animates belong to Class A, and inanimates are distributed among classes B, C, and D. Class A nouns (e.g. *tógúl* 'young man') are inherently singular/dual, so their complementary number corresponds to the plural, whereas Class B nouns (e.g. *c'ól* 'wing') are inherently dual/plural and singular when in the complementary. Class C nouns (e.g. *ɔ́l* 'head hair') are inherently dual and take the complementary suffix when singular or plural, and Class D nouns (e.g. *c'ó:* 'rock') do not occur in the complementary and are disambiguated by the verbal prefixes discussed further down. This behavior is summarized in (18) below. Observe that dual is unmarked throughout.

(18) KIOWA NOMINAL NUMBER

	Inherent number (-Ø)	Complementary (-gɔ́)
a. Class A	singular/dual	plural
b. Class B	dual/plural	singular
c. Class C	dual	singular/plural
d. Class D	*	—

[5] I am glossing over many interesting details here. The interested reader should consult Watkins & McKenzie (1984: 78f) for a thorough account of nominal number marking.

4.2 Essentials of Kiowa verb morphology

Watkins & McKenzie postulate the following verbal template in their descriptive grammar (elements in parentheses are not obligatory on every verb):

(19) KIOWA VERBAL TEMPLATE (Watkins & McKenzie 1984:147)

Personal prefix—(Adverb)—(Noun)—(Verb)—Stem—TAM/NEG=(SR)

I will concentrate on the personal prefixes (coming in sets I through IV) in what follows.

Set I is the simplest one (Watkins & McKenzie label it "intransitive"). These prefixes, shown in Table VI-9, are the ones used in intransitive predications like those in 0. In the 3rd plural, *á-* is used for humans and *gya-* elsewhere.

Table VI-9
KIOWA SET I PERSONAL PREFIXES[6]

1s	1ns	2s	2d	2p	3s	3d	3p	3c
a-	e-	em-	ma-	ba-	Ø-	ę-	á- / gya-	e-[7]

Watkins & McKenzie (1984: 115)

(20) KIOWA SET I PREFIXES (Watkins & McKenzie 1984:136)

a. Hɔ́ Carnegie-ku **em**-bánma?
Q C.-to 2sI-go
'Are you$_s$ going to Carnegie?'

b. Sân **Ø**-k^{h}óp-dɔ́.
child 3sI-hurt-be
'The child is sick.'

[6] Watkins & McKenzie's (1984) orthography consistently marks high-tone segments with an acute (´) and low-tone ones with a gravis (`). For the sake of simplicity, I follow the SIL orthography (and Watkins 1990, 1993) here in marking only high-tone, but not low-tone, segments.

[7] Note that, with plural referents in the 3rd person, *á-* (plural) corresponds to humans belonging to one's own tribe and *e-* (complementary) to members of other tribes: with the verb *kúːyɔ́* 'be lying', a Kiowa would say *kɔ́ygú* ***á-****kúːyɔ́* 'Kiowas are camped about' but *kyâgu* ***e-****kúːyɔ́* 'Comanches are camped about' even though in both sentences the referents are plural and appear in the complementary number (Watkins & McKenzie 1984:84). The same applies to Set II prefixes whith human 3rd person agents.

Set II prefixes (cf. Table VI-10) are used in transitive predications like those exemplified in (21).

Table VI-10
KIOWA SET II PERSONAL PREFIXES

	1s	1ns	2s	2d	2p	3s	3d	3p	3c
(REFL)	de-	ét-	be-	mé-	bé-	em-	én-	ém-	ét-
s	gya-	é-`	a-	má-`	bá-`	Ø-	ę́-`	á-`	é-`
d	nen-	et-	men-	mén-	bet-	ę-	én-	et-	et-
p	gyat-	ét-`	bat-	mán-`	bát-`	gya-	én-`	gyá-`	ét-`
c	dé-	ét-	bé-	mén-`	bét-	é-	én-	et-	ét-

Watkins & McKenzie (1984: 115)

(21) KIOWA SET II PREFIXES I (Watkins & McKenzie 1984:138)

a. Zébɔt **dé**-zón-tɔ́ː.
arrow 1s:cII-pull.out-FUT
'I will put out the arrow.'

b. Kút **gya**-kɔ̂n.
book 3s:pII-bring
'She brought the book(s).'

c. Áːdɔ **et**-t^{h}êm.
stick 3p:cII-break
'They$_p$ broke the stick.'

Set II prefixes distinguish person and number of an argument that is explicitly agentive and obligatorily animate, and number of a 3rd person patientive argument called object here ("object" in Watkins & McKenzie 1984 and "patient" in Watkins 1990, 1993). Plural objects are also the way of coding unspecified affected entities like 'something' or 'things'.[8]

Set III prefixes (cf. Table VI-11) introduce a further argument into the argument structure. Observe the examples in (22) that parallel those in (21).

[8] As mentioned above, dual appears to be the unmarked number value for nominals irrespective of class. In addition to the cases where dual objects require the dual prefixes in the different sets, there is a closed class of verbs that require dual object prefixes, although there is no dual object in the clause, e.g. *t'ɔ́hál* 'listen to' and *mɔ́nyáygɔ́* 'wave to'. Besides, reference to 3rd person plural humans with Set III prefixes also may call for dual object prefixes. Remember that 3rd person plural objects are normally non-referential or non-human, and that humans are Class A nouns. Since 3rd person complementary appear to be slightly disrespectful when applied to adults, 3rd person dual is the right choice in a case like *maːyóp* ***nén****-háygyá-dɔː nɔ gya-sém-mɔ́ːgɔ́* (woman 2s:dIII-learn-be and:DS 3p:pIII-clever-be.proficient) 'you$_s$ know women and how clever they$_p$ are' (Watkins & McKenzie 1984: 146).

Table VI-11
KIOWA SET III PERSONAL PREFIXES

	1s	1ns	2s	2d	2p	3s	3d	3c	2s/3s
—	ę́-	dɔ́-	gɔ-	mɔ́-	bɔ́-	*	**	***	em-
s	ę́-	dɔ́-	gɔ́-	mɔ́-	bɔ́-	á-	mé-	bé-	gyá-
d	né-	dét-	dét-	mén-	bét-	én-	mén-	bét-	nén-
p	yą́-	gyát-	gyát-	mán-	bát-	án-	mén-	bét-	yán-
c	nɔ́-	dɔ́t-	gɔ́t-	mɔ́n-	bɔ́t-	ɔ́-	mén-	bét-	gɔ́-
(implied)	2s/3s	X	X	X	X	2s/3s	X	X	1s

Watkins & McKenzie (1984: 116)

(22) KIOWA TRANSITIVE SET III PREFIXES (Watkins & McKenzie 1984:139)

a. Zébɔt **gɔ́**-zón-tɔ́ː.
arrow 2s:cIII-pull.out-FUT
'I will put out the arrow for you$_s$.'

b. Kút **yą́**-kɔ̂n.
book 1s:pIII-bring
'She brought me the book(s).'

c. Áːdɔ **bɔ́t**-t^{h}êm.
stick 2p:cIII-break
'They$_p$ broke your$_p$ stick / the stick for you$_p$.'

Set III prefixes ("patient:object", "beneficiary:patient" and "dative:patient" in Watkins & McKenzie 1984, Watkins 1990 and Watkins 1993, respectively) encode person and number of an argument that is explicitly non-agentive and obligatorily animate, and number of a 3rd person object. In the examples in (22), the morphological primary argument is a beneficiary (b) or a *dativus ethicus* / possessor (a, c), but also experiencers are usually cross-referenced by a Set III prefix in Kiowa. Note that in the following examples with intransitive verbs according to Watkins & McKenzie, there is arguably no 3rd person undergoer in the argument structure:

(23) KIOWA "INTRANSITIVE" SET III PREFIXES I (Watkins & McKenzie 1984:136f)

a. Mɔ́ːgí **ę́**-cán.
grandson 1s:sIII-arrive
'My grandson came home.'

b. Hɔ́ táːde **nén**-k^{h}óp?
Q eye 2s/3s:dIII-hurt
'Do your$_s$ eyes hurt?'

c. **Yą́**-tây.
1s:pIII-awake
'I awoke / something woke me.'

Moreover, some verbs taking Set III prefixes refer to bodily emanations ('sound' and 'smell'), and others "have to do with inability or failure to

accomplish some task" (1984: 136). Notably, it is frequent for many of these verbs to occur with Set III prefixes cross-referencing a plural unspecified or indeterminate object that is arguably absent from argument structure:

(24) KIOWA "INTRANSITIVE" SET III PREFIXES II (Watkins & McKenzie 1984:137)

a. **Án**-gúː.	b. **Án**-t'ɔ́ːdep.	c. **Án**-ɋ́ːdep.
3s:pIII-be.clever	3s:pIII-be.kind	3s:pIII-be.mean
'She is clever.'	'She's kind.'	'She's mean.'

As we shall see in §5, this phenomenon leads Nichols (1992) to characterize Kiowa as a language showing two types of alignment, viz. agentive and hierarchical.

Further observe several important features of Set III prefixes as analyzed by Watkins & McKenzie. First, there is an implied A that is not overtly marked but understood—in fact, the English translations of (b) and (c) in (22) above are not the only possibilities, since *bɔ́t-* '2p:cIII' implies no particular A and *yą́-* '1s:pIII' implies either a 2nd or 3rd person A. The context, an external nominal or an (infrequent) external pronominal can disambiguate. Second, singular primary arguments imply singular A's, and non-singular primary arguments do not imply any A in particular (with the exception of coreferential arguments: reflexive configurations are covered by Set II prefixes, as seen in Table VI-10 above). Third, a 2nd person singular primary argument may appear either in a subparadigm of its own without a particular implied A or subsumed with the 3rd person singular in a paradigm implying a 1st person singular A. Fourth, the 3rd person singular primary argument appears either in these underspecified forms or in a subparadigm of its own with 2s/3s implied A's. Finally, the starred forms in the 3rd person in Table VI-11 are covered by corresponding Set II prefixes, as seen in (25) below; instead of being encoded as beneficiaries / recipients / experiencers, animate 3rd person patients appear encoded as objects. I shall return to a number of these issues further down.

(25) KIOWA 3RD PERSON PATIENT SET III PREFIXES (Watkins & McKenzie 1984:113f)

a. **Nen**-háːdɔ́.	b. Hɔ́ **a**-tét?
1s:dII-shout	Q 2s:sII-tell
'I shouted to / for them$_d$.'	'Did you$_s$ tell her?'

Prefixes from Sets II and III can be used to convey a contrast along the parameter of control. In (a) below, the primary argument has control of the action and therefore a Set II prefix is used, while in (b) her dropping the dish is portrayed as an accident by choosing the prefix from the non-agentive Set III.

(26) KIOWA CONTROL MARKING (Watkins & McKenzie 1984:142)

a. K'ɔáttɔ **é**-ót.
dish:c 3s:cII-drop
'She dropped the dish (deliberately).'

b. K'ɔáttɔ **ɔ́**-ót-kyá.
dish:c 3s:cIII-drop-DETR
'She dropped the dish (accidentally).'

Observe that combinations of non-singular implied A's with 1st or 3rd person singular primary arguments are not expressed by Set III prefixes. Watkins & McKenzie (1984) postulate a "mixed:object" prefix set, labeled here Set IV (cf. Table VI-12), which fills precisely those gaps in the III-paradigm. Examples of clauses with verbs taking Set IV prefixes are seen in (27) below.

Table VI-12
KIOWA SET IV PERSONAL PREFIXES

	1ns	2d	2p	3d	3p	3c
s	êː-	mâː-	bâː-	ę̂ː-	âː-	êː-
d	édêː-	ménêː-	bédêː-	ę́nêː-	dêː-	édêː-
p	égîː-	mánîː-	bágîː-	ę́nîː-	gyâː-	égîː-
c	édɔ̂ː-	mɔ́nɔ̂ː-	bɔ́dɔ̂ː-	ę́nɔ̂-	dɔ̂-	édɔ̂-

Watkins & McKenzie (1984: 116)

(27) KIOWA SET IV PREFIXES (Watkins & McKenzie 1984:139)

a_1. Cę̂ː **má**-tę̂ː.
horse 2d:sII-catch
'You$_d$ catch the horse.'

a_2. Cę̂ː **mâː**-tę̂ː.
horse 2d:sIV-catch
'You$_d$ catch the horse for me.'

b_1. Kút **yą́**-pǫ́ː-ǫ́ː.
book 1s:pIII-look-give:IMPER
'You$_s$ show me the book.'

b_2. Kút **bágîː**-pǫːː-ǫːː.
book 2p:pIV-look-give:IMPER
'You$_p$ show me the book.'

Moreover, ditransitive verbs built on the root *ǫ́ː* 'give' require either Set III or Set IV prefixes. This fact supports Watkins & McKenzie's claim that the implied A is "semantically present" (1984: 119).

4.3 Further remarks on animacy and detransitivity

Before addressing a number of issues that bear relation to clause linkage, some additional remarks on clause internal morphosyntax are due. First, recall that inanimates may appear only as S's (Set I) or as objects (Sets II through IV).

This means, for example, that a sentence like ‘the wind broke it’ has to be rendered in Kiowa either by an incorporating intransitive one of the type “it wind-broke” or by a coordinative construction like (28), because *góm* ‘wind’ is inanimate and therefore excluded as a primary argument in a transitive clause.

(28) KIOWA INANIMATE S (Watkins & McKenzie 1984:112)

Tę́ːgya	Ø-p^{h}íː	nɔ	ɔ́yhɔde	e-t^{h}ém-gyá.
ice	3sI-heavy	and:DAc[9]	that	3cI-break-DETR

‘The ice$_i$ is / was heavy and that’s why it$_k$ broke.’

Second, Watkins & McKenzie group Kiowa verbs in two semantic classes, viz. intransitive and transitive, which differ as to whether they allow an explicit A in their argument structure. The fomer take Set I (“simple”, e.g. predicates signaling position and location, motion, some active verbs like *q̂ː* ‘dream’ and statives like *t’ó* ‘be cold’) and Set III prefixes (“semantically mixed group”, including mental verbs) while the latter take prefixes from Sets II through IV.

There are few derivational processes that turn intransitives into transitives, e.g. the unproductive suffix *-y* (*p^{h}q́ː* ‘be tied’ vs. *p^{h}q́-y* ‘tie’), but there is a common detransitivizing strategy: productive suffixation of *-gé* (frequently fusing with an intransitive perfective suffix *-iá* and appearing as *-gyá*). This yields pairs like those in (29) below.[10]

(29) KIOWA DETRANSITIVES I: *-gyá* (Watkins & McKenzie 1984:149f)

transitives	detransitives	
ól	ót-kyá	‘drop’ (cf. (26) above)
gúl	gút-kyá	‘write’
k^{h}yáy	k^{h}yáy-gyá	‘stretch’
hín	hín-gyá	‘dig’

Detransitivizing can also be achieved by turning a falling tone on a transitive stem into a high tone:

(30) KIOWA DETRANSITIVES II: TONE (Watkins & McKenzie 1984:150)

transitives	detransitives	
hɔ̂n	hɔ́n	‘defeat’ → ‘get exhausted’
t^{h}êm	t^{h}ém-gyá[11]	‘break$_{tr}$’ → ‘break$_{itr}$’

[9] The gloss ‘and:differerent actant’ shall become clear in §4.4.

[10] Some regular morphophonemic rules are responsible for the changes in stems and affixes.

[11] Observe that this tonal process cooccurs with *gyá*-suffixation here.

The last Kiowa detransitivizing strategy I shall mention here is stativization by means of *-dé* (or its allomorphs *-bé* and *-mé*) or *-l* (yielding positional verbs). Most roots appearing with *-dé* do not seem to occur without it, but those taking *-l* appear in pairs:

(31) KIOWA DETRANSITIVES III: STATIVIZATION (Watkins & McKenzie 1984:151)

transitives	detransitives	
—	zél-bé	'be terrible'
cé꞉	cé-l	'set$_{s/d}$' → 'sit$_{s/d/inan}$'
sɔ́꞉	sɔ́-l	'set$_{p}$' → 'sit$_{p/inan}$'

4.4 Switch-reference

Kiowa switch-reference is a complex phenomenon, and the interested reader is referred to Watkins (1993) for further details. Suffice it here to say that frequent clause-linking elements include three pairs of particles and/or enclitics that mark switch-reference. A sequential or conditional 'and, if' meaning is the yield of the particles / clitics *gɔ* and *nɔ*. By contrast, the enclitics *=cę꞉* and *=ę꞉* have a simultaneous meaning ('when, while'), and the particles / clitics *k'ɔt* and *ɔt* mean something contrary to what is expected, like 'yet, anyway'. The first pair seems to be the unmarked option.

(32) KIOWA SWITCH-REFERENCE MARKERS

	SAc	DAc
a. Neutral / sequential /conditional	(=)*gɔ*	(=)*nɔ*
b. Simultaneous	*=cę꞉*	*=ę꞉*
c. Adversative	(=)*k'ɔt*	(=)*ɔt*

Example (33) below shows instances of the same-actant markers *gɔ* and *=cę꞉*. In the sentences (a) through (d), SAc is the right choice because in every instance it is an actant in S or A function that is coreferential in both linked clauses. In (a), the A is actually the primary argument and appears marked by the Set II verbal prefix *á-* on both verb forms. In (b), *John* is in S function in the first clause and in A function in the second; note that in the latter clause it is morphologically only an implied agent. A morphological primary argument 3rd person plural is the A in both clauses in (d), while an implied 2nd person singular is the A in both clauses in (c).

(33) KIOWA SWITCH-REFERENCE I: SAC (Watkins & McKenzie 1984:237,240)

a. T^{h}alíː á-donmɔ **gɔ** hagya á-t^{h}ɔn.
boy 3p:sII-search and:SAc perhaps 3p:sII-find
'They$_p$ were searching for the boy and might have found him.'

b. John Ø-cán **gɔ** hɔ́ndé gyát-kɔ̂n.
J. 3sI-arrive and:SAc something 1p:pII-bring
'John came and brought us$_p$ gifts.'

c. Hɔ̂ndó hɔ́n ɋ́-hâːdɔ̂ ɋ́-bɋ́ː=**cɋ**ː.
why NEG 1s:ØIII-call.to:NEG 1s:ØIII-see=when:SAc
'Why didn't you$_s$ call to me when you$_s$ saw me?'

d. Cenbôː á-pɋːn-ɋ=**cɋ**ː t'ɋ́ːdé á-zɋːn-e.
cow 3p:sII-butcher-REP=when:SAc gallbladder 3p:sII-remove-REP
'While they$_p$ were butchering the cow, they$_p$ removed its gallbladder.'

By contrast, the examples in (34) below illustrate the use of the different-actant markers *nɔ* and =*ɋ*ː. In (a), the A in the first clause is a 1st person singular while in the second clause it is the 2nd person dual that is in A function. In (b), both clauses show S's, a 1st person the first and a 2nd person the second. In (c), the first clause has a 2nd person dual S, and the second has an indeterminate A, in this case a 3rd person singular.

(34) KIOWA SWITCH-REFERENCE II: DAC (Watkins & McKenzie 1984:237f)

a. Nɔ́ː mán-pɋ́ː-ɔ́m-tɔ́ː **nɔ** dáal mán-pɔː.
1s 2d:pIII-food-make-FUT and:DAc must 2d:pII-eat:IMPER
'If I cook for you$_d$, you$_d$ must eat!'

b. A-pɋ́ː-cán em-k^{h}óp-dɋ́ː-mêː=**nɔ**.
1sI-see-arrive 2sI-hurt-be-REP=and:DAc
'I came to see you$_s$ because I heard you$_s$ were sick.'

c. Hɔ́ ma-cándé-hɔː tɔ́ː-kya=ɋː mɔ́-p^{h}ɋ́ː-ɋːm-eː?
Q 2dI-reach-going house-at=when:DAc 2d:ØIII-stop-make-PFV
'Were you$_d$ about to reach home when she stopped you$_d$?'

The examples cited in (33) and (34) may give the impression that Kiowa switch-reference functions accusatively and that the labels same-actant and different-actant are misnomers. Nevertheless, both Watkins & McKenzie (1984) and Watkins (1993) argue that the notion of subject is problematic in Kiowa and that postulating a hierarchy of macroroles of the type A > E > O is necessary in order to describe the behavior of the switch-reference elements in the language. In particular, "sameness […] is judged according to the highest ranking

participant in the clause; if both an [A] and [an E] are present, the [A] is the basis for a same / different judgement" (Watkins & McKenzie 1984: 236). The following examples are cases in point:

(35) KIOWA SWITCH-REFERENCE III (Watkins 1993:143)

a. K^{h}odêde ámkut yą́-cán **gɔ** a-koːdó-ǫː-thąː.
suddenly your.letter 1s:pIII-arrive and:SAc 1sI-very-happy-feel
'Suddenly your$_s$ letter came (to me) and I felt very happy.'

b. Hɔ́n tɔ́ːde yą́-gúːdô **nɔ** a-bô-kihep-dɔː.
NEG long.time 1s:pIII-write:NEG and:DAc 1sI-always-worried-be
'You$_s$ have not written me in a long time and I have been uneasy.'

Both *yą́-* and *a-*give preferential treatment to a 1st person singular, but neither a putative S/A pivot nor morphology can account for the switch-reference alternation in (a) and (b). Although *yą́-* in principle implies a 2nd or 3rd person singular agent according to Watkins & McKenzie, the 2s agent is present in the argument structure of the first clause in (b) but actually absent in (a). The highest ranking argument in (b) is a 2sA in the first clause and a 1sS in the second, which explains the 'different' marker *nɔ*. By the same token, the highest ranking argument is a 1s in both clauses in (a), and therefore the 'same' marker *gɔ* is the right choice.

5. A second opinion on Kiowa

Let me quote in full length from Nichols's 1992 study here, both in order to summarize the facts presented in the preceding section and to learn about the treatment given by Nichols to Watkins & McKenzie's analysis.

> Kiowa […] presents a borderline example of a hierarchical alignment system. The syntactic agreement categories for verbal prefixes, in Watkins's terms, are simple (for subjectively inflecting intransitives), agent, patient (variously indirect object and possessor, and apparently never a true patient), and object (true direct object). Intransitives are split: some take simple agreement prefixes and others take patient agreement; hence in this respect Kiowa is a stative-active language. Transitive inflection has two hierarchical aspects. First, access to either agent or patient status requires animacy; also, objects are necessarily third person. Second, singular patients imply singular agents; special prefixation forms are required when there are other number combinations. Thus animacy, person, and number are all

> involved in determining access to agreement slots. Animates are compatible with any agreement category, but inanimates can only be objects; first and second person outrank third and appear in patient function when combined with a third person nonagent, which is necessarily object. Apart from these hierarchical features, the alignment system of Kiowa is hard to classify. Intransitive verbs clearly follow the stative-active pattern. Transitives are basically hierarchical / accusative, except that the agreement priorities are distinctive: verbs agree with agent or patient but not both, and agreement is with the patient if one is present, otherwise (including when the exceptional number combinations appear) with the agent.
>
> (Nichols 1992: 67f)

Nichols's account of Watkins & McKenzie's (1984) analysis of Kiowa is noteworthy for several reasons. First, alignment is thought of as mixed rather than split: both an agentive and a hierarchical principle seem to be at work. Second, the hierarchical element appears to be based upon an indexability hierarchy SAP > animate > inanimate that is somehow complemented by number. Third, this hierarchy determines the access to "agent or patient status". It goes without saying that a thorough account of Kiowa morphosyntax with particular reference to syntactic functions lies beyond the scope of this section, but some fundamental issues raised by the above quote from Nichols (1992) shall be addressed in what follows.

5.1 A second look at the transitive paradigms

Since the prefixes from Sets III and IV correspond to person configurations that are in complementary distribution, a combined paradigm that includes both sets is arguably more than a mere *jeu d'ésprit*. For this purpose, I have relabeled the agent as A, the patient / beneficiary / dative as E, and the object as O, a terminology that shall be utilized henceforth. Table VI-13 below shows the prefixes from Sets II through IV for singular O's. The columns show different A's (the 1st person nonsingular is identical with the 3rd person complementary) and the rows different E's—with the exception of the last row, where there is no E. Prefixes in italics are from Set II, those in boldface are from Set IV, and the rest belong to Set III.

Table VI-13
KIOWA PREFIXES SETS II, III & IV (S OBJECT)

E \ A	1s	2s	3s	2d	2p	3d	3p	3c
1s	—	ę́	ę́	**mâ:**	**bâ:**	**ę̂:**	**â:**	**ê:**
2s	gyá / gɔ́	—	gɔ́	—	—	gɔ́	gɔ́	gɔ́
3s	gyá	á	á	**mâ:**	**bâ:**	**ę̂:**	**â:**	**ê:**
1ns	—	dɔ́	dɔ́	dɔ́	dɔ́	dɔ́	dɔ́	dɔ́
2d	mɔ́	—	mɔ́	—	—	mɔ́	mɔ́	mɔ́
2p	bɔ́	—	bɔ́	—	—	bɔ́	bɔ́	bɔ́
3d	mé	mé	mé	mé	mé	mé	mé	mé
3p	*gya*	*a*	*Ø*	*má`*	*ę́`*	*bá`*	*á`*	*é`*
3c	bé	bé	bé	bé	bé	bé	bé	bé
Ø	*gya*	*a*	*Ø*	*má`*	*ę́`*	*bá`*	*á`*	*é`*

This way of arranging the personal prefixes leads to the following important observations (the notation x→y refers to A's and E's in what follows):

- The s→s configurations form a subsystem different from the rest of the paradigm. 1s is marked whether it is A (*gyá-*) or E (*ę́-*), 3s is marked only in E function (*á-*) when there is no 1s actant, and 2s is between the two, appearing as E (*gɔ́-*) throughout but also yielding to a 1sA.
- All non-singular E's are marked with a characteristic prefix irrespective of the A person. In this respect, the marking reminds one of a passive, but the forms bear little resemblance to the intransitive markers. In other words, X→ns configurations privilege the E over the A with regard to access to marking.
- The ns→s configurations correspond to the prefixes of Set IV with the exception of the 2sE cases, which are all marked alike (*gɔ́-*). Unlike most other prefixes, the detailed information corresponds to the A instead of the E here.

From this cursory exploration and the fact that the forms with non-singular O's follow the same pattern (excepting the forms with animate 3rd person patient, which take Set II prefixes, as noted above), we can conclude that person and number marking in the prefix slot is governed by a number of hierarchies:

(36) KIOWA HIERARCHIES I

a. Referential: SAP > 3
b. Semantic: animate > inanimate
c. Relational: nsE > nsA > sE > sA

First, it is obvious that the distinction between SAPs and 3rd persons is of paramount importance, since only the latter can be objects. Second, as we have seen, only animates can be morphological primary arguments, i.e. be marked for person and number by a given prefix, when there are two or more arguments. Third, a hierarchy combining the macroroles E and A with the distinction non-singular versus singular underlies most of the marking patterns underlying the prefixes of Sets III and IV.

The attentive reader is likely to have noticed two important exceptions to these generalizations. If nsA outranks sE, 2sE should not have a single marker (*gɔ́*-) but be marked by the Set IV prefixes like the other singular persons. By the same token, if sE outranks sA, 1sA *gyá*- should override neither 2sE (which it can, but need not, supersede) nor 3sE (*á*-). Therefore, (c) in (36) must be revised as follows:

(37) KIOWA HIERARCHIES II

c. Relational: nsE > 2sE/1sA > nsA > 1s/3sE > 2s/3sA

Needless to say, (c) in (36) is more elegant but simply fails to capture all the relevant conditions governing person marking. Somewhat to the analyst's relief, it is in the infamous minimal local scenarios that the markers become ill-behaved, and the reasons for such an odd distribution like (37) can be sought in historical accidents and/or pragmatic effects. The principles underlying the III-IV paradigms are complex but fairly transparent: non-singular outranks singular (like in Algonquian, but unlike in Tibeto-Burman), E outranks A (opposite to the relational hierarchy governing switch-reference), and animates outrank inanimates.

As to the relationship between SAPs and 3rd persons, observe that whenever an SAP is in O function, it is encoded as an E by the prefixes—only 3rd persons can be encoded as O's. Therefore, prior to the hierarchy in (37) there is a referential hierarchy SAP > 3 that is best thought of as depicting a different behavior of SAPs and of 3rd persons: whereas an SAP is strictly O-averse, as it were, and can therefore appear as either S, A, or E, a 3rd person may appear in any function but is restricted in doing so by the presence of an SAP.

5.2 A closer look at intransitives

Let me now turn to the question of active alignment raised by Nichols (1992). According to Watkins & McKenzie (1984: 110f), prefixes mark (i) role, person and number of the "primary animate participant" on the one hand and (ii) number of the O on the other if there is a 3rd person O. The possible roles, as han been repeatedly noted, are "agent" (A), "patient / beneficiary / dative" (E),

and "object" (O), and it should have become clear in §4 that they are not concrete semantic roles but rather abstract functions. Notably, Set III prefixes are said to involve "a minimum of two explicit participants, one non-agentive (the patient), a third person object, and an implied agent" (1984: 111).

The problem of argument structure

As we saw in §4.2, intransitive verbs are said to fall into two subclasses with respect to the verbal prefixes: "a) simple intransitives which normally take the intransitive prefixes [Set I, FZ] and b) a semantically mixed group of intransitives which require the patient:object prefixes [Set III, FZ]" (1984: 134). The problem here is to ascertain whether given predicates of the second group are monovalent or bivalent, but the examples given in (23) above, repeated below as (38), show that there may be different cases to be distinguished:

(38) KIOWA "INTRANSITIVE" SET III PREFIXES II (Watkins & McKenzie 1984:136f)

a. Mɔ́ːgí **ę́**-cán.
grandson 1s:sIII-arrive
'My grandson came home.'

b. Hɔ́ táːde **nén**-k^{h}óp?
Q eye 2s/3s:dIII-hurt
'Do your$_{s}$ eyes hurt?'

c. **Yą́**-tây.
1s:pIII-awake
'I awoke / something woke me.'

To my mind, (a) and (b) are serious candidates for an argument structure of the type [S E], i.e. Dixon & Aikhenvald's extended intransitive clause. Unless this characterization is grossly inadequate, the question becomes: exactly what kind of clause are these? But (c) is even more problematic, since I cannot possibly verify from Watkins & McKenzie's brief account whether the 'something' is actually present in the argument structure. If it is, then it may be assimilated to (a) and (b). If it is truly a monovalent predicate, there is a case for an agentive pattern.

Watkins & McKenzie's examples (1984: 137f) suggest that some of the verbs in this group have two arguments in their argument structure, like *kóːyiː* 'get bored with', *óːbép* 'develop a desire for', and *ǫ́ːdép* 'like', but others like *t'ɔ́ːdep* 'be kind' and *pǫ́y* 'sound' are not very good candidates for an [S E] clause. Most of these verbs seem to occur with prefixes coding plural O's, "the normal object number for an unspecified or indeterminate object ('things')" (1984: 137):

(39) KIOWA "INTRANSITIVE" SET III PREFIXES III (Watkins & McKenzie 1984:137)

a. **Yą́**-p'ɔ́ygyá.
1s:pIII-forgot
'I forgot (it, something).'

b. **Yą́**-yây.
1s:pIII-be.busy
'I'm busy / occupied with things.'

Such verbs might have evolved from bivalent predicates to monovalent ones, but it is hard to tell what they are now if the second argument is as non-referential and non-specific as it seems to be. In any case, it appears that the 3rd person plural is something *sui generis*. Watkins & McKenzie say in a footnote that "the agent:object paradigm [Set II, FZ] always permits an interpretation involving a 3pl patient" (1984: 198):

(40) KIOWA SET II PREFIXES II (Watkins & McKenzie 1984:198)

Gya-hɔ́ːgya.
1s:sII-got
'I got / bought it.' or 'I got / bought it for them$_p$.'

However, they add that "it is misleading to consider this 3pl patient an explicit component of the agent:object prefixes; it is not marked in the prefixes in any way, either directly, as is the agent, or indirectly, as an implied agent" (1984: 198). Finally consider the case where there is a 3p human E but no A. A Set II prefix is used (as noted above, instead of the expected Set III prefix), but it is the 3sA form that occurs (and the referent is as in English, 'one'):

(41) KIOWA SET II PREFIXES III (Watkins & McKenzie 1984:198)

Á-k'yamkót=cęː hɔ́ndé **gya**-háːya.
3phumI-be.persevering=when:SAc something 3s:pII-learn
'When one is persevering, one learns things.'

Watkins & McKenzie (1984: 117f) postulate an arguably quite abstract morphemic analysis for the various sets according to which the persons explicitly marked by the morphology are either the A (person and number in Sets II and IV) or the E (person and number in Set III)—the reader is referred to Appendix 2 for more details. Particularly unhappy is the fact that, out of the 108 prefixes, 23 fail to show the surface forms that would be predicted by their underlying counterparts (1 from Set I, 8 from Set II, 11 from Set III, and 3 from Set IV). However, there are similarities between Set I and Set II that are worth noting: (i) low tone, (ii) segments marking person and number, and (iii) the neutralization of the opposition 1ns versus 3c. Set I forms and those from Set II with singular O's have been reproduced here:

(42) KIOWA SET I AND SET II PREFIXES (sO) (Watkins & McKenzie 1984:128)

	1s	2s	2d	2p	3s	3d	3p	3c(=1ns)
Set I	a	em	ma	ba	Ø	ę	á	e
Set II (sO)	gya	a	má`	bá`	Ø	ę́`	á`	é`

Watkins & McKenzie conclude that these similarities "[suggest] very strongly that Kiowa is an accusative language, which treats actors / subjects of intransitives and agents / subjects of transitives […] in the same way" (1984: 129). That a claim formulated in such strong terms is unsustainable becomes apparent even after a cursory glance at the complete paradigms, but a more moderate version suggesting a possible former link is certainly plausible. Unfortunately, the fact that the implied agent does not appear to be overtly marked leaves us with a morphology that is not very useful for learning more about argument structure.

Two classes of intransitives

If we accept the hypothesis that there are two classes of intransitive predicates, a further question concerns their semantic distribution. Normal intransitives (i.e. those taking Set I prefixes) include verbs of position and location, verbs of motion, intransitives derived from transitives (e.g., *t^{h}émgyá* 'get broken, break' and *há꞉pá* 'rise, get picked up'), "active intransitives" like *hî꞉* 'die' and *ą̂꞉* 'dream', and "stative verbs" like *tón* 'be fat' and *kót* 'be strong, be hard'. Intransitives taking Set III prefixes also consitute a semantically mixed class: "[w]hile many can be called experiential, some refer to bodily emanations […], and others have to do with inability or failure to accomplish some task" (Watkins & McKenzie 1984: 136). The latter subgroup is said to include items like *ɔ́꞉dep* 'be unable', *ɔ́ttép* 'fail to find', and *yɔ́ttep* 'blunder, go off the wrong way', but also *mɔ́꞉gɔ́* 'be proficient at'.

A simple parameter like strict agentivity cannot possibly explain such a distribution. Apparently, some arguably patientive predicates such as 'die' and 'get broken, break' are treated like other agentive ones such as 'arrive', but differently from others reserved for human arguments whose cognitive abilities and/or emotional / bodily activities are involved.

In order to tentatively formalize this opposition, let me briefly suggest the minimal semantics that has to be postulated for Kiowa. A is the actant typically in volitional control of the state of affairs (e.g. an agent), O is the actant typically most affected by the state of affairs (e.g. a theme or patient), and E is the actant typically affected by the state of affairs in a different way that shall become clear further down (e.g. a recipient, beneficiary or experiencer). Thus, predicates and clauses can be classified according to how they mark their

actants by means of the prefix morphology (Greek letters in boldface represent markers that distinguish person and number, and the others are markers that distinguish only number):

(43) KIOWA MAIN PREDICATE AND CLAUSE TYPES

		A	O	E
a. intransitives$_1$	(Set I)	[**α**]		—
b. intransitives$_2$	(Set III)	[β]		**γ**
c. intransitives$_3$	(Set III)	—	—	**γ**
d. transitives$_1$	(Set II)	**δ**	ε	—
e. transitives$_2$	(Set III/IV)	β	**γ**	—
f. transitives$_3$	(Set III/IV)	—	β	**γ**
g. transitives$_4$	(Set III/IV)	*	*	*

Intransitives fall into three subtypes: (a) simple intransitives like 'she arrived' with only one argument, (b) extended intransitives with two arguments, like 'my grandson came home' in (23), and (c) intransitives where the only argument in neither agentive nor patientive like 'be kind' and 'be unable'. The marking strategies are either Set I or Set III (two arguments: one equivalent to the S of the simple intransitive, β, and the other an additional experiencer / possessor, γ). Transitives, on the other hand, come in four subtypes: (d) simple transitives with an animate agent and 3rd person patients, (e) simple transitives with 3→SAP configurations, (f) non-control transitives in which the O of the original simple transitive is marked as β and the E is marked as γ, and (g) extended transitives or ditransitives. In the latter type, several marking subpatterns emerge according to the hierarchies detailed in §5.1 above.

The affectedness opposition between O's and E's mentioned above requires some comments. Song's (1993) study identifies a "passive of interest" in Japanese and Korean that is semantically comparable to the construction marked by a Set III prefix in Kiowa. Opposed to the normal passive, where undergoers are "objectively " affected by actions directed at them, the passive of interest has an argument that is emotionally affected by actions that are not directed at him or her—notably, this argument is obligatorily animate and typically human. Whereas the action is a cause for an effect with normal passives (a sufficient and necessary condition), Song characterizes the action as a reason for the passive of interest (a necessary, but not sufficient, condition). Consider the examples in (44) below; Japanese passive verbs display a suffix *-(r)are* while Korean passives utilize a different auxiliary (*tangha* 'suffer') from the one used in active constructions (*ha* 'do'):

(44) PASSIVES OF INTEREST (Song 1993:95,127f)

JAPANESE

a. Sensei-ga Mary-no musuko-o sikat-ta.
teacher-NOM M.-GEN son-ACC scold-PT
'The teacher scolded Mary's son.'

b. Mary-ga sensei-ni musuko-o sikar-**are**-ta.
M.-NOM teacher-DAT son-ACC scold-PASS-PT
'Mary was subjected to the teacher's scolding her son.'

KOREAN

c. Kyengchal-i John-uy atul-ul choypho-ha-essta.
police-NOM J.-GEN son-ACC arrest-do-PT
'The police arrested John's son.'

d. John-i kyengchal-eykey atul-ul choypho-**tangha**-essta.
J.-NOM police-DAT son-ACC arrest-suffer-PT
'John was subjected to the police's arresting his son.'

Interestingly enough, such constructions are also possible with intransitives, e.g. Japanese *watasi-ga musuko-ni sin-are-ta* (1s-NOM son-DAT die-PASS-PT) 'I was subjected to my son's death'.

Apart from the similarities between the Japanese and Korean passive of interest and the Kiowa Set III/IV constructions, Klaiman's (1991: 110f) observations with respect to attribution of control (distinguishing control from non-control predicates, and further subdividing each type into two subtypes according to agentivity, affectedness, and other parameters) are likely to prove useful when future research endeavors a thorough analysis of Kiowa clause structure.

5.3 Direction in Kiowa

From what has been said about Kiowa so far, it is clear that the language shows hierarchical alignment in the sense that the access both to marking slots and to whatever syntactic functions Kiowa displays is governed by a complex interplay of relational, referential, and animacy hierarchies, but I have not been able to find any trace of pragmatic direction opposing 3'→3" configurations to 3"→3' interactions in Watkins & McKenzie (1984) (but recall that [-animate] → [+animate] interactions cannot be expressed by transitive clauses). Local direction is somewhat problematic, since non-singular non-agents are marked for person and number whether the scenarios are 1→2 or 2→1. In the minimal local scenarios shown in (45) below, *yą́-* implies a 2s/3s agent but marks 1s as

non-agentive argument (a), whereas *gyá-* corresponds to a 1s agent and a 2s/3s non-agentive argument (b). This distribution would suggest a 1s > 2s ranking and labeling the former prefix 'inverse' and the latter 'direct', but remember the existence of the 2s non-agentive prefix *gɔ́-*. Despite Watkins & McKenzie's translation in (c), the yield of this prefix is an unspecified implied agent, so the configuration 1s→2s can be covered by both *gyá-* and *gɔ́-*.

(45) KIOWA MINIMAL LOCAL SCENARIOS (Watkins & McKenzie 1984:139,120)

a. Kút **yą́**-pǫ́ː-ǫ́ː.
book 1s:pIII-look-give
'You$_s$ show me the book.'

b. Cę̂ː **gyá**-ǫ́ː.
horse 2s/3s:sIII-look-give
'I gave you$_s$ / her a horse.'

c. Cę̂ː **gɔ́**-ǫ́ː.
horse 2s:sIII-look-give
'We / she / they gave you$_s$ a horse.'

A similar situation holds for the SAP↔3 configurations when there are non-agentive arguments (E's) present, but remember the alternation between Set II and Set III with agents, as illustrated in (46). A SAP→3 interaction is covered by a Set II prefix while a 3→SAP configuration is expressed by a Set III prefix:

(46) KIOWA MIXED SCENARIOS (Watkins & McKenzie 1984:139,221)

a. Cę̂ː **má**-tęː.
horse 2d:sII-catch
'You$_d$ catch the horse.'

b. Mɔ́n mîːn **gɔ́**-áttɔ.
probably about.to 2s:ØIII-chase
'[A bull] is probably about to chase you$_s$.'

To be sure, Set III is used to express many other things in addition to core inverse. But since the category is actually present and explains the alternation between the two transitive clause types 1 and 2 in (43) above, I believe it is useful to refer to these clause types as direct and inverse, with the proviso that Set III prefixes occur in other functions as well. Consequently, I now turn to a functional and formal characterization of direction.

Functional aspects of Kiowa direction

The prefixes from Sets II through IV are fairly heterogeneous as to focality, a feature that is related to the hierarchies mentioned in §5.1. Set II prefixes can be said to be high-focal since they explicitly distinguish person and number for the A and the O is invariably 3rd person. Set IV prefixes mark person and number of the A and imply a 1s/3s E, and in this sense they are somewhat less high-focal than Set II prefixes. Some of Set III prefixes are like those of Set IV in that person and number of the E/O are explicitly marked while the A is only specified as singular (2s/3s→1s, 2s/3s→3s) or the other way round (1s→2s/3s), but most are non-focal since they only specify one argument (non-singular E) while leaving the A unspecified (also the 2sIII markers behave this way).

As to the direction domains, the discussion above suggests that only core direction is present. Non-local direction seems to be inexistent in Kiowa, and local direction seems to be represented by a blurred subsystem of the combined II-III-IV paradigms at best.

Formal aspects of Kiowa direction

Kiowa nominals are unmarked for case or obviation status, and so core direction is marked by means of the prefix alternation on the verb, i.e., it is head-marked.

With regard to the question of alignment, Kiowa morphosyntax appears to operate based upon the two hierarchies (i) SAP > animate > inanimate and (ii) nsE > 2sE/1sA > nsA > 1s/3sE > 2s/3sA mentioned in §5.1. The findings discussed in §5.2 suggest that three macroroles A, O, and E are the relevant notions instead of traditional syntactic functions built around S/A or S/O pivots. Watkins & Mckenzie (1984) and Watkins (1990) explicitly state that the received notions of subject and object are not useful for a description of Kiowa coding and behavioral phenomena, and Watkins (1993: 141) says that the unmarked word order seems to be AEOV (albeit admittedly unnatural because of the many overt NPs)—one more hint at the fundamental role played by the macroroles.

6. Summary of Kiowa-Tanoan languages

Due to the scarcity of data available to me, I cannot be more confident about my hypotheses regarding the interplay of direction and alignment systems found in these intriguingly complex languages of the Southwest. A great deal of variation is what strikes the analyst as the hallmark of the direction-marking patterns: no two Kiowa-Tanoan languages show exactly the same system, although the Tiwa languages are considerably close to each other with respect to the functional and

formal aspects (the concrete morphology used in the oppositions, however, is different). Local scenarios are sometimes direct (Tiwa) and sometimes inverse (Tewa), inverses are possibly role-remapping (Tiwa) or not (Tewa), and there are profound differences between Tanoan and Kiowa. Not only is alignment in the latter language less traditionally pivot-oriented than the Tanoan systems but also the several hierarchies that govern the access to both the macroroles A, E, and O and the morphological marking are much more intricate.

Few linguistic families provide a better illustration of Klaiman's claim that inverse systems differ structurally from each other—even though the challenging Kiowa-Tanoan morphosyntax makes these systems poor textbook examples. Further research is certainly likely to improve our limited knowledge and our understanding of these fascinating languages.

Chapter VII
Mapudungun*

> We live in the interplay of two modes of knowing, the one chattering like a monkey yet powerless to mean, the other meaningful as a sunset yet powerless to name.
> — Sean Kane, *Wisdom of the mythtellers*

We set sail from the North American plains with the languages famed for an intricate verb morphology that distinguishes between direct and inverse forms and a comparatively simple nominal morphology that marks obviation status. Our final destination are some plains and valleys in southern South America, where the 'language of the land' (*mapu* 'land' and *dungu(n)* 'speech, language') is slowly but surely beginning to thrive after a century-long period of slumber imposed by the dominant culture. In some respects, these two extremes are similar: the case for a role-remapping inverse has been made in the literature, and dependent and independent clauses differ. Interestingly, however, there is no marking whatsoever on Mapudungun nominals apart from a plural morpheme and an oblique and semantically fairly unspecified postposition. The reader will have the opportunity to explore how something close to Algonquian-like direction works without overt obviation.

The last language discussed in this study is currently spoken by an uncertain but large number of people (at least 200,000) in the Chilean provinces of La Araucanía and Los Lagos, and the Argentinean provinces of Chubut, Río Negro, Neuquén, Buenos Aires, and La Pampa. Linguists have insistently avoided considering Mapudungun an isolate despite the difficulties encountered when trying to relate it to Mayan (Stark 1970, Hamp 1971), Arawakan (Payne 1984) and Panoan (Loos 1973). Campbell (1997) is an example of scholars postulating a separate group, Araucanian, for the various Mapudungun dialects (Huilliche, Pehuenche, Ranquel, and others). Here the main variety, sometimes called Central Mapudungun, is addressed.

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* Consult Campbell (1997: 193), Fabre (1998: 720f) and Salas (1992: ch1) for more information on the language, its speakers, and literature about it. For language descriptions, readers with a reasonable command of Spanish should consult Augusta (1903) and Salas (1992). Other readers are referred to Smeets (1989) and Zúñiga (2000).

1. Mapudungun verb morphology and clause structure

Mapudungun is an agglutinative, basically head-marking language with a rich verbal morphology that indicates person and number of actants, aspect-related notions, spatial categories, tense, evidentiality, and deontic modality, among others. There are no markers of grammatical case, and obligatory number marking is restricted to nonsingular with adjectives and plural with [+human] nouns. Verb forms can be categorized as either finite or nonfinite, the latter forms showing less productivity as to tense and mood, but especially marking one person less than the former. I will discuss them in this order.

1.1 Finite verb forms

Finite verb forms show mood (*-i* for indicative, *-l* for subjunctive and *-Ø* for imperative), person (*-i* for 1st, *-m* for 2nd and *-Ø* for 3rd) and number markings (*-i* for singular, *-u* for dual and *-n* for plural).[1] The number distinction for 3rd person forms arises as part of the personal pronouns *engu* 'they$_d$' and *engün* 'they$_p$' is cliticized or affixed to the zero-marked verb (in the subjunctive and imperative moods, *engu* and *engün* are normally pronounced fully after the non-zero mood-person endings *-le* and *-pe*, respectively).[2] Monopersonal verb forms take the endings shown in Table VII-1 and are used in intransitive predications like (1a) and (1b) below:

Table VII-1
MONOPERSONAL ENDINGS OF MAPUDUNGUN VERBS (INDICATIVE)

	actual form	underlying form
1s	-n	(unknown)
1d	-iyu	-i -i -u
1p	-iñ	-i -i -n
2s	-imi	-i -m -i
2d	-imu	-i -m -u
2p	-imün	-i -m -n
3s	-i	-i -Ø -Ø
3d	-ingu	-i -Ø -Ø =ng -u
3p	-ingün	-i -Ø -Ø =ng -n

[1] Several morphophonemic rules may apply, e.g. assimilation (*-i-n>-iñ*), elision (*-i-i-n>-iñ;* also *-fi-i>-fi*, cf. Example (3)), epenthesis (*-m-n>-mün*), resyllabification (*V-i>Vy*), etc.

[2] As other languages addressed in this study, Mapudungun does not distinguish gender on verb forms. Here the feminine forms *she* and *her* are used in the default English renderings, but the reader should keep in mind that masculine referents are, in principle, possible as well.

(1) MAPUDUNGUN MONOPERSONAL VERB FORMS I

a. Truf-Truf müle-ymu.
T. be-2dIND
'You$_d$ live in Truftruf.'

b. Petu rue-w-i.
still scratch-REFL-IND
'She is scratching herself.'

Additionally, monopersonal forms can be used with transitive verbs when a 3rd person undergoer is low in animacy and definiteness. For instance, in Example (2) the verb form is monopersonal, although there are two participants involved:

(2) MAPUDUNGUN MONOPERSONAL VERB FORMS II (Salas 1992:263)

Chi pu che kintu-yngün chi müñkuwe muday.
ART p people search-3pIND ART jar corn.liquor
'This people looked for the jar with corn liquor.'

Other 3rd person undergoers—typically, proper names and common nouns high in animacy, individuation, and definiteness—trigger a *fi*-marking on the finite verb, and the other marking is understood as referring to the actor, as shown in (3). Although anaphoric reference usually requires this suffix (b), the exact conditions under which *-fi* occurs are still not fully understood. With an applicative suffix (*-l(el)* or *-(ñ)ma*), the participant seen as ultimately affected by the action is the one that appears on the finite verb, and this is normally high in animacy, so with a 3rd person *-fi* appears (c).

(3) MAPUDUNGUN 3RD PERSON UNDERGOER (*fi-*) (Salas 1992:272)

a. Chi weche wentru feypi-**fi** tañi kutran wenüy: …
ART young man say-3O 3POSS ill friend
'The young man said to his sick friend: …'

b. Chi wenüy feypi-**fi**: …
ART friend say-3O
'The friend said to them: …'

c. Arkü-ma-**fi**-ñ tüfachi lewfü.
ebb-APPL-3O-1sIND this river
'I [will] dry her this river.'

In opposition to the bipersonal forms with *-fi* stand (i) forms where both

SAPs are involved and (ii) forms with only 3rd person arguments where the undergoer is more salient than the actor in discourse (I will use the labels PROXIMATE and OBVIATIVE here). The morpheme alternation is given in (4):

(4) MAPUDUNGUN *-fi*, *-e*, AND RELATED MARKING

a. Non-local scenarios	3prox→3obv^{LS}	-Ø
	3prox→3obv^{HS}	*-fi*
	3obv→3prox	*-e*
b. Mixed scenarios	SAP→3^{LS}	-Ø
	SAP→3^{HS}	*-fi*
	3→SAP	*-e*
c. Local scenarios	MLS (1s↔2s)	*-e*
	ELS$_1$ (1→2R)	*-w*
	ELS$_2$ (2→1R)	*-mu*

As long as a 3rd person undergoer is low enough in animacy / definiteness, monopersonal forms can be used. 3rd person undergoers trigger a *fi*-marking on the verb if they do not outrank the actor, which is possible if the latter is not so important in the particular discourse world or a segment therein. In the non-local and the mixed scenarios, the undergoer is marked for person and number with the same endings used for monopersonal verbs, a suffix *-e* appears, and there is a verb-final suffix *-(m)ew*, apparently related to the general postposition *mew*, marking 3rd person actors:

(5) MAPUDUNGUN *e*-FORMS IN NON-LOCAL AND MIXED SCENARIOS

a. Ngürü mütrüm-**e**-y-**ew** williñ.
fox call-E-IND-3A otter
'The otter called the fox / the fox was called by the otter.'

b. Mütrüm-**e**-n-**ew** chi kalku.
call-E-1sIND-3A ART warlock
'The warlock called me.'

In contrast with a form like *mütrüm-fi* 'she$_{prox}$ called her$_{obv}$', it is a form like *mütrüm-e-y-ew* 'she$_{obv}$ called her$_{prox}$' in (5a) that is used if the undergoer is the salient argument. Analogously, opposed to a form like *mütrüm-fi-ñ* 'I called her' Mapudungun has a form like *mütrüm-e-n-ew* 'she called me', which is obligatory to depict that particular state of affairs. As in Algonquian languages, there are two ways of saying that a 3rd person acted upon another 3rd person but only one way to depict the SAP↔3 interaction: if the SAP is the actor, the

form cannot take *-e*; if the SAP is the undergoer, the form must take *-e*.

Observe how obviation status interacts with verbal marking in (6):

(6) MAPUDUNGUN PROXIMATES AND OBVIATIVES I (Smeets 1989:512)

a. (I shall continue the story [and tell you] as far as I know this old man. First of all, his name was Joan Soñan Kinkechew. When he was a young man, he used to work around on all sorts of places as a day laborer. He grew up in great misery.)

b. Kim-ürke-la-y ñi ñuke.
know-REP-NEG-IND 3POSS mother
'He$^{i}_{prox}$ did not know his^{i} mother$^{j}_{obv}$.'

c. Ñi chaw duam-ürke-la-e-y-ew.
3POSS father care-REP-NEG-E-IND-3A
'His^{i} father$^{k}_{obv}$ did not care for him$^{i}_{prox}$.'

d. Yall-tuku-rke-e-y-ew ka domo mew.
son.of.man-beget-REP-E-IND-3A other woman PPOS
'He$^{k}_{obv}$ begot him$^{i}_{prox}$ as an illegitimate child with another woman.'

The central character in the story is the old man whose youth is the topic in this particular passage, and other 3rd person referents are obviative. Therefore, verb forms with the proximate actant as undergoer are *e*-marked, like in (c) and (d), and those with a proximate actor like (b) are not.

An important question in this context is what kind of verbal marking is triggered by an obviative actant. Verb forms with *-e-…-(m)ew* never take additional marking irrespective of the type of actor or undergoer as long as both are 3rd person. With SAP actors, some NPs trigger *-fi* on the verb and others do not (7a-b), and discourse saliency cannot be the only parameter—compare (7b) to *pe-n añchümalleñ* 'I have seen a midget'. In non-local scenarios, it is safe to say that *-fi* is anaphoric when there is no coreferential NP in the clause, but it may or may not appear when there are coreferential NPs present (7c-e).

(7) MAPUDUNGUN PROXIMATES AND OBVIATIVES II

a. "Küme presedente dulli-entu-a-yiñ," pi-y.
good president choose-take.out-FUT-1pIND say-IND
'"We$_{p}$ will choose a good president," she said.' (Smeets 1989:528)

b. Kim-la-**fi**-n ti añchümalleñ.
know-NEG-3O-1sIND ART midget
'I do not know this midget.' (Smeets 1989:535)

c. Rume weda-ka-ke-fu-**fi** feyti doy nie-nu-lu.
very treat.badly-CONT-HAB-RI-3O ART more have-NEG-LU
'He$_{prox}$ used to treat very badly those$_{obv}$ who had less [than he had].' (Smeets 1989:516)

d. Feymew llemay kureye-**fi** ta üllcha domo.
therefore PART take.for.wife-3O PART maiden woman
'[It was] because of that, no doubt, [that] he$_{prox}$ took the maiden$_{obv}$ as his$_{prox}$ wife.' (Salas 1992:220)

e. Entu-me-tu-y ñi üllcha domo.
take.out-AND-back-IND 3POSS maiden woman
'He$_{prox}$ took his maiden$_{obv}$ back out.' (Salas 1992:227)

As already mentioned above, the exact conditions governing *-fi* on the predicate still await further study. What these data show is that, (i) apart from the 3A suffix *-(m)ew*, obviatives are simply unmarked on the verb, and (ii) with some 3rd person undergoers *-fi* appears if there is no *-e-…-(m)ew* present. I therefore conclude that what explains the opposition between forms taking *-e* and those with *-fi* is not obviation. This conclusion is supported by data presented in Contreras & Álvarez-Santullano (1989) showing that *-fi* alternates in the southern variety (Huilliche) with the preposition *a* borrowed from Spanish with comparable 3rd person undergoers.

The local scenarios are more complex. There are special forms for the MLSs, i.e. when the interaction involves exactly two SAPs:

(8) MAPUDUNGUN MLS FORMS

a. pe-**e**-n
see-E-1sIND
'you$_s$ saw me'

b. pe-**e**-yu
see-E-1dIND
'I saw you$_s$'

The 2s→1s form *pe-e-n* 'you$_s$ saw me' differs from the 3→1s form *mütrüm-e-n-ew* 'she called me' in (5) only in that the actor marking is missing at the right end, so in this local scenario the undergoer might be said to be explicitly marked and the other local person to be understood by default. In fact, this is close to the situation found in Huilliche, where the 1→2s marking is *-e-y-m-i* (-E-IND-2-s). Nevertheless, the Central Mapudungun form is evidently anomalous: the morpheme *-e* cooccurs with 1st person dual marking.

Also the other local configurations (1ns→2s, 1→2ns, 2ns→1s, 2→1ns) are less straightforward than one would expect. While Huilliche sticks to the principle of marking only person and number of the undergoer, showing forms like *pe-e-y-mu* 'I/we$_d$/we$_p$ saw you$_d$' and *pe-e-y-mün* 'I/we$_d$/we$_p$ saw you$_p$',

Central Mapudungun has a single 1p reflexive form to cover all the other local 2nd person undergoer configurations: *pe-w-iyiñ* 'we$_p$ saw ourselves/each other; I saw you$_d$; we$_d$ saw you$_s$; etc.').[3] The 2→1 forms are closer to what seems to be the original pattern in that they distinguish person and number of the undergoer:

(9) MAPUDUNGUN 2→1 ELS FORMS

a. pe-mu-n
see-MU-1sIND
'you$_{d/p}$ saw me'

b. pe-mu-yu
see-MU-1dIND
'you$_{s/d/p}$ saw us$_d$'

c. pe-mu-iñ
see-MU-1pIND
'you$_{s/d/p}$ saw us$_p$'

Since *-fi* and *-e* never cooccur on a given verb form, the traditional account supposes that they occur in the same templatic position, but that *-mu* and *-w* appear in other slots closer to the verb stem. An overview of bipersonal and monopersonal verb forms is given in Table VII-2 below.[4]

Table VII-2
ENDINGS OF MAPUDUNGUN VERBS (INDICATIVE)

O \ A	1s	1d	1p	2s	2d	2p	3
1s				-e-i-u	← -mu-n →		-e-n-mew[5]
1d					← -mu-i-u →		-e-i-i-u-mew
1p					← -mu-i-n →		-e-i-i-n-mew
2s	-e-n	← -w-i-i-n →					-e-i-m-i-mew
2d		← -w-i-i-n →					-e-i-m-u-mew
2p		← -w-i-i-n →					-e-i-m-n-mew
3^{HS}	-fi-n	-fi-i-i-u	-fi-i-i-n	-fi-i-m-i	-fi-i-m-u	-fi-i-m-n	-fi-i / -e-i-mew
3^{LS}	-n	-i-i-u	-i-i-n	-i-m-i	-i-m-u	-i-m-n	-i / -e-i-mew
monop.	-n	-i-i-u	-i-i-n	-i-m-i	-i-m-u	-i-m-n	-i

[3] Salas (1992: 129) describes the Huilliche form *-eymi* as covering all 1→2 configurations and being therefore underspecified compared to the 2→1 forms *-en*, *-mun*, *-muyu* and *-muiñ*. The discrepancy between this account and the fuller paradigm given here, which is also the one found in Augusta (1903: 84), may be due to idiolectal variation or to the rather precarious state of this Mapudungun variety.

[4] The verb forms found in the Argentinean variety called Ranquel are very close to the ones analyzed here, but they are not identical. Cf. Fernández Garay (2001: 28f).

[5] The 3A suffix *-(m)ew* shows the allomorphs *-ew* with 3→1 and 3"→3s' interactions and *-mew* elsewhere.

1.2 Nonfinite verb forms

Mapudungun nonfinite verb forms replace the mood-person-number ending introduced in §1.1 above by one of the suffixes *-n, -el, -lu, -yüm, -am, -uma* and *-mum*. These forms have been traditionally called infinitives (*n*-form), participles (*el*- and *lu*-forms), and gerunds (*yüm*- and *am*-forms), or have been simply labeled by their characteristic morpheme. Since some of them are systematically multifunctional, I have followed the latter practice here.

Some examples of nonfinite forms, which typically occur in subordination, are given in (10) below.[6] In (a), 'there is my V-*el*' is the idiomatic Mapudungun equivalent of 'I have to V', and consequently both *tañi pu-am* 'my intention to arrive' and *tañi müpu-a-el* 'my going to fly' are subordinate to *müle-y* 'it/there is'. In (b) we see the absolute construction *dewma epe wunlu* 'when it had almost dawned', but the *lu*-form might well have been coreferential with an argument in the matrix clause as well, as is the case with the *yüm*-form in (c).

(10) MAPUDUNGUN NONFINITE VERB FORMS (Salas 1992:161f,256f)

a. Ngünengüne tañi pu-**am** müle-y tañi müpu-a-**el**.
quickly 1sPOSS arrive-AM be-IND 1sPOSS fly-FUT-EL
'In order to arrive quickly I will have to fly.'

b. Feymew dewma epe wun-**lu**,
then already almost dawn-LU
feymew kon-ingu kiñe fütra mawida mew.
then enter-3dIND one big forest PPOS
'Then, when it had almost dawned, they$_d$ entered a big forest.'

c. Ngüñü-le-**yüm** che rume yam-ke-la-fi.
hunger-PROG-YÜM people even respect-HAB-NEG-3O
'When hungry, not even people did [this animal] respect.'

Table VII-3 below shows the nonfinite forms (*el*-, *lu*- and *yüm*-forms) that take direction morphemes. The *n*-form is not normally used with local scenarios, and actually lacks a form with *-e*; the *am*-form precludes any kind of personal morphology from appearing on it, and the comparatively less frequent *uma*- and *mum*-forms are less well understood and do not seem to appear with personal morphology either.

[6] A notable exception is the *lu*-form, which can appear in the future in main clauses instead of the finite indicative. Since this bears no relationship to our present concern, I will neglect this presumably innovative use of the *lu*-form in this study.

Table VII-3
MAPUDUNGUN NONFINITE VERB FORMS (SELECTION) I

	-EL	*-LU*	*-YÜM*
X→3	(-fi) -el	(-fi)-lu	(-fi)-yüm
3→X	-e -t[7] -ew	-e -lu -mew	-e -yüm -ew
1s→2s	-fi -el	-fi -lu	-fi -yüm
2s→1s	-fi -el	-e -lu -mew	-fi -yüm
1→2R	-w -fi -el	-w -lu	-w -yüm
2→1R	-mu -fi -el	-mu -lu	-mu -yüm

The formal make-up of these three forms is far from predictable. Compare them to the finite verb forms already discussed, summarized in Table VII-4:

Table VII-4
FINITE MAPUDUNGUN VERB FORM ENDINGS

X→3	*(-fi)*	$[\text{-person-number}]_A$
3→X	*-e*	$[\text{-person-number}]_O$ *-(m)ew*
1s→2s	*-e*	$[\text{-person}_1\text{-number}_d]$
2s→1s	*-e*	$[\text{-person}_1\text{-number}_s]$
1→2(rest)	*-w*	$[\text{-person}_1\text{-number}_p]$
2→1(rest)	*-mu*	$[\text{-person-number}]_O$

First, observe that the *lu*-forms deviate from the general pattern by showing the *mew*-suffix with a 2s→1s configuration. Second, the *el*-forms have *-fi* in all ELSs. Third, the 2s→1s *lu*-form displays *-e* instead of *-fi* like the other nonfinite forms, and all 1s→2s nonfinite forms have the morpheme *-fi* instead of what the finite forms show with this configuration, viz. *-e*. Apart from this, the nonfinite forms parallel the finite forms by replacing the person-number morphology by the suffixes *-el, -lu*, and *-yüm*, respectively.

Therefore, whereas *-fi* could be said to encode "high" undergoers in direct forms of the finite paradigm and the non-local and mixed scenarios of the nonfinite paradigms, it has a different yield in the nonfinite local scenarios. Notably, all three nonfinite forms display different patterns in this respect, and it is not clear which forms might be the innovative ones.

[7] Like most modern authors, I have assigned the *etew*-form to the *el*-paradigm here. It might be that *-el* was originally *-et* or something similar, but since so little is known about Mapudungun historical phonology, this cannot be more than a hypothesis.

There is more to these nonfinite forms, however. First, the paradigms given in Table VII-4 are not the only ones that exist. In particular, the *el*-form seems to appear also in a different, more recently developed, paradigm showing the ending *-etew* for the 3→X configurations and *-fiel* elsewhere. Second, nonfinite verb forms may be disambiguated as to reference when needed via external possessives (*-el*, *-yüm*) or personal pronouns (*-lu*), like in Example (10) above. Although there is some variation as to which actant is marked with help of these external markers, the pronouns clearly tend to be those shown in Table VII-5. Note that the *yüm*-form patterns like the first *el*-form, and PERS and POSS stand for personal and possessive pronoun, respectively.

Table VII-5
MAPUDUNGUN NONFINITE VERB FORMS (SELECTION) II

	EL_1		EL_2		LU	
X→3	$POSS_A$	*-(fi-)el*	$POSS_A$	*-(fi-)el*	$PERS_A$	*-(fi-)lu*
3→X	$POSS_O$	*-etew*	$POSS_O$	*-etew*	$PERS_O$	*-elumew*
1s→2s	$POSS_O$	*-fi-el*	$PERS_A$ $POSS_O$	*-fi-el*	$PERS_O$	*-fi-lu*
2s→1s	$POSS_A$	*-fi-el*	$PERS_A$ $POSS_O$	*-fi-el*	$PERS_O$	*-fi-lu*[8]
1→2(rest)	$POSS_O$	*-w-fi-el*	$PERS_A$ $POSS_O$	*-fi-el*	$PERS_O$	*-w-lu*
2→1(rest)	$POSS_A$	*-mu-fi-el*	$PERS_A$ $POSS_O$	*-fi-el*	$PERS_O$	*-mu-lu*

1.3 A brief note on objecthood

Consider the examples in (11) in order to better understand some fundamental syntactic principles of Mapudungun:

(11) MAPUDUNGUN OBJECTHOOD I

a. Elu-fi-ñ mansun.
give-3O-1sIND ox
'I gave her an ox.'

b. Elu-nge-y mansun.
give-PASS-IND ox
'She was given an ox.'

c. Wül-i ñi ruka kiñe wingka mew.
give-IND 3POSS house one foreigner PPOS
'She gave (i.e. sold) her house to a foreigner.' (Augusta 1916:256)

d. Wül-nge-y ñi ruka kiñe wingka mew.
give-PASS-IND 3POSS house one foreigner PPOS
'Her house was given (i.e. sold) to a foreigner.'

[8] Also *-e-lu-mew* is possible here.

With the ditransitive verb *elu-* 'give, hand, deliver', it is the recipient that gets cross-referenced on the verb, either in active (a) or passive clauses (b). By contrast, with *wül-* 'give' the recipient *kiñe wingka* 'a foreigner' has to be marked by the oblique / general postposition *mew* and the theme gets marked on the verb. While it is apparent that *elu-* corresponds to English 'give somebody something' while *wül-* is 'give something to somebody', the syntactic status of the *mew*-phrase is not entirely clear from data like these.

Actually, verbs that behave like *elu-* are rare. Most transitive predicates (including equivalents of English 'show', 'present', 'introduce', and the like) are like *wül-* in that a third argument (appearing unmarked) is licensed only by means of suffixation of the applicative suffixes *-ñma* or *-lel*:

(12) MAPUDUNGUN OBJECTHOOD II (Salas 1992:134)

a_1. Weñe-ñma-nge-y-mi tami waka.
steal-APPL-PASS-IND-2s 2sPOSS cow
'Your$_s$ cow was stolen / they stole your$_s$ cow.'

a_2. Weñe-ñma-ñma-nge-y-mi waka tami fo̲tüm.
steal-APPL-APPL-PASS-IND-2s cow 2sPOSS son.of.man
'Your$_s$ son's cow was stolen / they stole your$_s$ son's cow.'

b_1. Weñe-ñma-e-y-mi-mew tami waka.
steal-APPL-INV-IND-2s-3A 2sPOSS cow
'She stole your$_s$ cow.'

b_2. Weñe-ñma-ñma-e-y-mi-mew waka tami fo̲tüm.
steal-APPL-APPL-INV-IND-2s-3A cow 2sPOSS son.of.man
'She stole your$_s$ son's cow.'

Note that a human referent—especially, but not necessarily, an SAP—is the preferred morphological primary argument, so that clauses where the theme is the primary argument (a-sentences) are in principle grammatical but not the idiomatic way of describing the state of affairs in which a human referent can be seen as ultimately affected. The final *dativus commodi vel incommodi*, in this case expressed by means of *-mi* '2s' on the verb, is the primary argument instead of the theme (*waka* 'cow') or an intermediate *dativus commodi vel incommodi* (*tami fo̲tüm* 'your$_s$ son') in both passive (a-sentences) and inverse clauses (b-sentences).

The above means that, if inverse clauses are correctly characterized as remapping (an analysis advanced by two of the four authors to be considered in the next section), Mapudungun allows 3rd person subjects only when no SAP can be construed as such. Since an analogous situation holds for inanimates and animates, the indexability hierarchy SAP > 3anim > 3inan can be said to govern

the access to primary argumenthood. Alternatively, the relational hierarchy subject > primary object > secondary object is what is accessed according to the indexability hierarchy if no remapping takes place. I shall return to these findings toward the end of this chapter.

2. Analyses of Mapudungun

2.1 The middle analysis

Arnold (1994, 1997) has suggested the account summarized in (13) for the finite portion of the morphosyntax described in Section 1:

(13) ARNOLD'S ANALYSIS OF MAPUDUNGUN FINITE FORMS I

a.	Direct	SAP→3, 3prox→3obv	-Ø; *-fi*
b.	Inverse	3→SAP, 3obv→3prox, 2→1	*-e*; *-mu*
c.	Middle	1→2	*-e*; *-w*
d.	Hierarchy	1 > 2 > 3prox > 3obv	

First, there is an opposition between direct (SAP→3, 3prox→3obv) and inverse (3→SAP, 3obv→3prox) forms. 2→1 configurations are assimilated to the latter, and *-mu* is postulated as allomorph of the inverse for the ELSs. Second, 1→2 configurations are said to have been originally inverse (compare the Huilliche data mentioned above) but to have moved to an in-between level. Arnold hypothesizes that the original indexability hierarchy was SAP > 3prox > 3obv, with no distinctions in the local domain, and that Central Mapudungun innovated in treating 1→2 configurations differently, not completely arriving at a simple revised hierarchy of the form 1 > 2 > 3prox > 3obv.

Arnold explicitly mentions grammatical relations in her discussion of Mapudungun. In her view, inverse forms are what I have called remapping constructions in Chapter II: the macroroles are remapped onto the grammatical relations; actors become objects and undergoers become subjects.[9] Word order patterns from Rivano (1989, 1991) are elegantly reduced to three under this assumption, whereas an absence of this remapping leaves all six possibilities in (14), where *domo* is 'woman', *wentru* 'man' and *l̲angümfi* / *l̲angümeyew* direct and inverse versions of 'X killed Y', respectively:

[9] Cf. Rhodes's analysis of Central Ojibwa in Chapter III.

(14) MAPUDUNGUN WORD ORDER PATTERNS I (Rivano 1991:160f)

	‘the woman killed the man’	macroroles	grammatical relations	
a.	domo l̲angümfi wentru	AVO	Subj V Obj	
b.	domo wentru l̲angümfi	AOV	Subj Obj V	
c.	l̲angümfi wentru domo	VOA	V Obj Subj	
d.	wentru l̲angümeyew domo	OVA	Subj V Obj	(=a)
e.	wentru domo l̲angümeyew	OAV	Subj Obj V	(=b)
f.	l̲angümeyew domo wentru	VAO	V Obj Subj	(=c)

Arnold further argues that, since verb and object are always adjacent and natural pausing is always between subject and the rest, there is a VP constituent in Mapudungun. More evidence for this claim comes from the interpretation of questions: a WH-word like *iney* ‘who’ always questions the object irrespective of word order in bipersonal clauses when an NP is present:

(15) MAPUDUNGUN WORD ORDER PATTERNS IN QUESTIONS (Arnold 1997)

a_1.	Iney	kam	l̲angümfi	Peyro?	[Obj V Subj]
	who	Q	killed:3’→3”	P.	
a_2.	Peyro	iney	kam	l̲angümfi?	[Subj Obj V]
	P.	who	Q	killed:3’→3”	
a_3.	Iney	kam	Peyro	l̲angümfi?	[Obj Subj V]
	who	Q	P.	killed:3’→3”	

All three: ‘Who did Peyro kill?’

b_1.	Iney	kam	l̲angümeyew	Peyro?	[Obj V Subj]
	who	Q	killed:3”→3’	P.	
b_2.	Peyro	iney	kam	l̲angümeyew?	[Subj Obj V]
	P.	who	Q	killed:3”→3’	
b_3.	Iney	kam	Peyro	l̲angümeyew?	[Obj Subj V]
	who	Q	P.	killed:3”→3’	

All three: ‘Who killed Peyro?’

According to Arnold (1994), additional evidence for the argument remapping analysis comes from the possessives used with nonfinite forms. Observe in Example (16) how direct *el*-forms take a possessive that is coreferential with their actor (a), whereas inverse ones require coreference with the undergoer (b). Local scenarios differ from this general pattern because they take the *fi-el*-form and the 2nd person possessive irrespective of its macrorole—e.g., it is undergoer in (c).

(16) MAPUDUNGUN *el*-FORMS (Smeets 1989:278)

a. Müle-y [**mün**$_A$ allkütu-ñma-ya-fi-el ñi dungu$_O$].
be-IND 2pPOSS lsiten-APPL-FUT-3O-EL 3POSS word
'You$_p$ must listen to his word.'

b. Fey müna kutranka-w-üy [**mi**$_O$ trem-üm-a-(e)-t-ew].
3 very torment-REFL-IND 2sPOSS grow-CAUS-FUT-E-EL-3A
'She made a lot of sacrifices in order to raise you$_s$.'

c. Feymew iñche küpa-n [**mün**$_O$ feypi-pa-ya-fi-el: …]
therefore 1s come-1sIND 2pPOSS say-CIS-FUT-FI-EL
'Therefore I have come to tell you$_p$ [this]: …'

In other words, Mapudungun as analyzed by Arnold does not conform to the inverse type mentioned in Chapter I in that, despite having both obligatory inversion (mixed scenarios) and pragmatic inversion (non-local scenarios), it is configurational rather than non-configurational. Arnold's account can be summarized in the following relevant portion of the verbal template:

(17) ARNOLD'S ANALYSIS OF MAPUDUNGUN FINITE FORMS II

Slot A	Slot B	Slot C	Slot D	Slot E
-nge PASS	*-fi* 3Obj:	*-e* INV	[Person-	*-mew* 3Obj:
-mu 2A	DIR		Number]$_{Subj}$[10]	INV
-w REFL				

Appealing though Arnold's analysis is, there are some problems. First, it is possible to find word orders that differ from the ones listed in (14) , like the one shown in (18) below. In this example, an OVA order appears with a "direct" verb, i.e. object-verb-subject in Arnold's terms.

(18) MAPUDUNGUN WORD ORDER PATTERNS II (Coña 1930:18)

[Feychi Paillaw ñi ñawe, tañi ñuke yem,
this P. 3POSS daughter.of.man 1sPOSS mother late
Wenter ñi püñeñ]$_O$, [ngapitu-pe-y]$_V$ [ñi chaw]$_A$.
W. 3POSS child.of.woman take.for.wife-CERT-IND 1sPOSS father
'My father took Paillau's daughter for wife, my mother, Wenter's daughter.'

[10] Since the mood suffix does not interact with the rest of the morphemes, it has been neglected here and in what follows. The only exceptions are, as already noted, some 1st person suffixes (*-n* in the indicative and *-chi* in the imperative) and some 3rd person suffixes (*-le* in the subjunctive and *-pe* in the imperative).

As correctly pointed out by Rivano, when informants face an utterance like (12a) *domo l̲angümfi wentru* and are to decide which NP is to be interpreted as actor and which as undergoer, "there is nothing impossible about either alternative. […] [P]revious information and discourse structure could render [a judgment according to which the last NP is the A] appropriate" (1991: 165). The word order patterns listed in (14) correspond to preferences that are arguably strong but may be overridden by particular discourse needs, especially if the predicate semantics makes only one interpretation plausible, as in (18).

In fact, it is interesting to see what the particular discourse needs might be in the passage from which (18) is taken, and why an OVA order with a zero-marked verb might be the appropriate choice. In a text where the narrator tells about his youth, there comes a point where he gives a record of his older relatives, most of whom have already passed away. He mentions, among several maternal relatives, his grandfather, Paillau, and his grandmother, Wenter. Then he utters the sentence in (18) but does not seem to switch to his father as the center of attention; instead, two more sentences describe his mother's charitable nature before he comments on his father's bad temper. Nevertheless, the clause that immediately follows the sentence in (18) is a quote from the father:

(19) MAPUDUNGUN WORD ORDER PATTERNS III (Coña 1930:18)

"Dewma	nie-fi-lu	mafü-n,"	pi-ke-lu	kam.
already	have-3O-LU	pay.for.wife-1sIND	say-HAB-LU	PART

'"After having her I paid (i.e. made the traditional payment to her father)," he used to say.'

Therefore, it is reasonable to interpret the whole passage as being basically about the narrator's mother but with a short section where the father is the topical person. In (19), the father is in A function in the direct discourse and S in the other clause, and thus it is not surprising that the verb forms used are direct. The fact that the undergoer NP *feychi Paillaw ñi nãwe* 'Paillau's daughter' in (18) appears clause-initially tells the hearer that this referent is important, either because of its topical status in the preceding discourse or due to the fact that it will continue to be topical after the excursus on the father.

With regard to the possessives used with nonfinite forms, we saw in §1.2 that there is some variation. First, there is more than one paradigm for the *el*-form, particularly in the local scenarios: possessives may refer to either the A or the O, although there is a clear tendency to choose the 2nd person form. Second, whereas the *yüm*-form patterns like the *el*-form, the *lu*-form almost invariably takes a personal pronoun coreferential with the O in all configurations different from SAP→3. Thus, evidence coming from all nonfinite forms might well be used to make a case against the remapping analysis rather than in its favor.

A further issue that makes an oversimplified account in terms of inverse GRs unattractive is the scope of some verbal suffixes like the andative *-me* (a), the cislocative *-pa* (b-c) and the combination of the suffix *-r* and the cislocative *-pa* with the meaning 'V on one's way here' (d). In fact, all directionals behave alike in this respect:

(20) CONTROL OF MAPUDUNGUN DIRECTIONAL SUFFIXES

a. Yel-**me**-tu-a-fi-ñ ñi kawellu.
bring-AND-back-FUT-3O-1sIND 3POSS horse
'I will go and bring him his horse back.' (Augusta 1903:97)

b. Iney kam pe-**pa**-e-ymi-mew?
who Q see-CIS-e-2sIND-3A
'Who came to see you$_s$?' (Coña 1930:248)

c. Tüfachi pichi üñüm dewma la-ya-fu-lu iñche pe-**pa**-e-n-ew.
this little bird already die-FUT-RI-LU 1s see-CIS-E-1sIND-3A
'This little bird came to see me when I was dying.' (Coña 1930:422)

d. Elel-**rüpa**-tu-a-e-n tañi kawellu.
deliver-on.way.here-again-FUT-E-1sIND 1sPOSS horse
'Return to me my horse on your$_s$ way back.' (Augusta 1903:98)

e. Pichintu müle-**me**-a-n.
a.short.while be-AND-FUT-1sIND
'I will go and stay a short while.' (Augusta 1903:96)

The controller of *-me* in (a) is the 1st person and the verb is direct, so one could hypothesize that subjects control these directional suffixes. However, as seen in the other examples in (20), it is the actor rather than the undergoer who controls them in inverse forms. Intransitives such as Example (e) complete the picture and suggest that if the controller of directionals is an S/A pivot, inverse forms are not like passives in that there is no argument remapping.

This latter comment raises the question of passivization in general in Mapudungun, a construction that has not been addressed so far in this study. The verb form Arnold labels "passive" takes the monopersonal endings given in Table VII-1 and a suffix *-nge*, perhaps related to the verb *nge-* 'be'. As can be seen from (21), simple forms can be translated as passives or indefinite actives (a), but forms with the applicative *-lel* (b) are more difficult to render in English. In (c), *kimngelay* could arguably be translated as 'it was unknown'. Example (d) might suggest that the forms have an indefinite actor and are not intransitive passives, since if they were, their subject should be able to control the directional *-me*. The fact that it cannot does not have to do with the predicate

choice or the animacy of the NP, as seen from (e). Whether these *nge*-forms are best characterized as passives or as indefinite actor forms shall be addressed shortly.

(21) MAPUDUNGUN PASSIVE / INDEFINITE ACTOR FORMS

a. Mütrüm-**nge**-n.
call-PASS-1sIND
'I was called / someone called me.' (Salas 1992:133)

b. Mütrüm-el-**nge**-n tachi trewa.
call-BEN-PASS-1sIND ART dog
'They / someone set the dog on me.' (Salas 1992:133)

c. Chew ñi amu-n? Kim-**nge**-la-y.
where 3POSS go-N know-PASS-NEG-IND
'Where had she gone? No one knew.' (Salas 1992:226)

d. El-**nge**-me-y chillka ayechi ruka mew.
leave-PASS-AND-IND letter that house PPOS
'They left the letter in that house (lit. they / someone went and left the letter in that house).' (Augusta 1903:97)

e. Ye-me-**nge**-y chi machi.
bring-AND-PASS-IND ART shaman
'They / someone went to bring the shaman.' (Salas 1992:229)

2.2 The person focality analysis

Salas (1992) advanced an analysis in terms of person focality rather than direct and inverse. THE FOCAL PERSON is coreferential with the person and number suffixes on the verb, and is opposed to what he calls SATELLITE PERSON. The indexability hierarchy is 1 > 2 > 3determinate > 3indeterminate, and the yield of the suffixes is as shown in (22):

(22) SALAS'S ANALYSIS OF MAPUDUNGUN FINITE VERB FORMS I (Salas 1992:119f)

a. 3rd person indefinite agent *-nge*
b. 3rd person definite agent *-e-…-(m)ew*
c. 3rd person definite patient *-fi*
d. 2nd person agent MLS *-e*
e. 2nd person agent ELS *-mu*
f. 2nd person patient (incorporated) *-e*; *-w*
g. Hierarchy: 1 > 2 > 3determinate > 3indeterminate

Observe some profound differences between Salas's account and Arnold's. First, as already mentioned, he does not utilize the notion of direction in the sense that a given morpheme encodes direct and other inverse. By contrast, he labels his indexability hierarchy "focalization hierarchy" and says that those arguments outranking others will have access to focal person marking. For example, in the sentences in (23) below, the focal person is 2d (*-mu*) because SAPs outrank 3rd persons, and the satellite person is marked by either *-fi* if patientive or *-e-…-(m)ew* if agentive. In (b) the focal person is zero-marked because it is the 3rd person, and the satellite marking is as in (a).

(23) MAPUDUNGUN FOCAL AND SATELLITE PERSONS I (Salas 1992:125f)

a. pe-**fi**-mu tachi witran vs. pe-**e**-y-mu-**mew** tachi witran
see-3O-2d ART foreigner see-E-IND-2d-3A ART foreigner
'you$_d$ saw the foreigner' 'the foreigner saw you$_d$'

b. feypi-rke-**fi**-Ø vs. feypi-rke-**e**-y-Ø-**ew**
say-REP-3O-3 say-REP-E-IND-3-3A
'she$_{prox}$ said to her$_{obv}$' 'she$_{obv}$ said to her$_{prox}$'

A second difference between this analysis and Arnold's is that the more intricate local scenarios are seen as applying the same marking strategy, viz. higher actant is focal, lower actant is satellite—with the proviso that the 2nd person patient is "incorporated" into the number marking of the focal person. In the first sentence of (24), the focal 1st person is marked on the verb via *-n* while the 2nd is nonfocal and triggers a satellite marker *-e*. The second has also a focal 1st person but "includes in it" the satellite second person and is therefore dual. Third, the allomorphy is distributed differently. For Arnold, *-e* and *-mu* are inverse allomorphs while for Salas they are different markers.

(24) MAPUDUNGUN FOCAL AND SATELLITE PERSONS II

leli-**e**-n vs. leli-**e**-yu
look.at-E-1sIND look.at-E-1dIND
'you$_s$ looked at me' 'I looked at you$_s$'

Third, the *nge*-forms are considered indefinite actor forms and not passives as in Arnold's account. Apart from what was mentioned in §2.1 in this respect, it is important to state that Salas's "indefinite agent" is the lowest person in the focalization hierarchy. Unlike this framework, a direct / inverse analysis would have to explain why these forms are not *e*-marked if they are not de-transitivized passives, since they would be expected to be inverse. If they were considered active in a framework different from Salas's, they should take *-fi*

with 3rd person undergoers; notably, they never do. They seldom occurred hundred years ago with agentive intransitives, according to Augusta (25):

(25) MAPUDUNGUN *nge*-FORM WITH INTRANSITIVES (Augusta 1903:60)

Kom	antü	ülkantu-**nge**-ke-y	tiechi	ruka	mew.
all	day	sing-PASS-HAB-IND	that	house	PPOS

'All day long people sing in that house.'

The fact that examples like (25) are still rarely found suggests that *-nge* does not simply encodes an indefinite or indeterminate actor, and therefore I will follow the opinion of the majority in considering the *nge*-construction a passive.

In Salas's terms, however, satellite 3rd person affixes are *-fi/Ø* (determinate patient), *-e-...-(m)ew* (determinate agent) and *-nge* (indeterminate agent), and focal 3rd persons are zero-marked. Observe his analysis of the following non-local scenario forms:

(26) MAPUDUNGUN NON-LOCAL SCENARIO FORMS I (Salas 1992:126)

a. Feypi-*e*-rke-y-**Ø**-*ew* chi ngürü:…
say-E-REP-IND-3-3A ART fox
'The fox_{prox} told [the $\text{cougar}_{\text{obv}}$]:…'

b. Feypi-rke-*fi*-**Ø** chi ngürü:…
say-REP-3O-3 ART fox
'[The $\text{cougar}_{\text{prox}}$] told the fox_{obv}:…'

c. Feypi-*nge*-rke-y-**Ø** chi ngürü:…
say-NGE-REP-IND-3 ART fox
'The fox_{prox} was told: …'

In (a), the patient focal person is zero-marked and the agent satellite person is encoded by the simulfix *-e-...-(m)ew*. In (b), the agent focal person is zero-marked and the patient satellite person is marked by the suffix *-fi*. In (c), the patient focal person is zero-marked and the agent satellite person is marked by the suffix *-nge*.

Finally, the 3rd persons are labeled "determinate" and "indeterminate" in Salas (1992), and not proximate and obviative as in Arnold (1994, 1997).[11] In examples like those in (27) below (parallel to those in Example 23b above), both 3rd persons are "determinate", but it is the referents of the focal and the satellite persons that are different. The determinacy of 3rd persons and their obviation status are not merely terminological variants but different concepts.

[11] In earlier work, Salas used the terms "definite" and "indefinite". Cf. Rivano (1991: 107f).

(27) MAPUDUNGUN NON-LOCAL SCENARIO FORMS II

langüm-fi	vs.	langüm-e-y-ew
kill-3O		kill-E-IND-3A
'she$_{prox}$ killed her$_{obv}$'		'she$_{obv}$ killed her$_{prox}$'

Thus, Salas's analysis amounts to postulating the following template:

(28) SALAS'S ANALYSIS OF MAPUDUNGUN FINITE VERB FORMS II

Slot A	Slot B	Slot C	Slot D
-nge indefA$_{SP}$	*-fi* 3O$_{SP}$	[Person-	*-e*$_B$-…-*mew*$_D$
-mu 2A$_{SP}^{ELS}$	*-e* 2A$_{SP}^{MLS}$ ~	Number]$_{FP}$	3A$_{SP}$
-w 2O$_{SP}$	2O$_{SP}^{MLS}$ ~		

2.3 The direct object analysis

In Smeets's (1989) view, the personal affixes given in Table VII-1 above are subject markers, *-fi* and *-e* are direct object markers, and *-(m)ew* is a dative subject marker. She labels *-fi* and *-e* external and internal direct object, respectively, and characterizes the opposition as follows:

> The suffix *-fi* refers to a participant which is to be found in the situation at large, outside the speech act. Such a participant cannot be a first or second person […], nor can it be a third person which is identified by the context. The referent of *-fi* is therefore a third person which is identified by the situation. […] The suffix *-e* indicates that the subject is patient and is to be determined on the basis of the context. […] The subject marker may indicate a first or second person, or a third person which is known through the context. The agent of the event denoted by an *-e* form is indicated by [the dative subject suffix].
>
> (Smeets 1989: 193f)

Furthermore, her dative subject suffix *-(m)ew* "indicates a third person agent" but "a zero filler in [this slot] marks a first or second person singular agent", and the dative subject marker "necessarily cooccurs with *-e* […] [and] [t]he subject, which is contextually determined (marked by *-e*), is the patient" (1989: 194).

Finally, *-w* and *-mu* are labeled 1st and 2nd person agent respectively, and they are said to occur in the same slot as the agentless passive suffix *-nge* and be used when the total number of actants exceeds two.

> [The suffix *-w*] indicates that the deleted participant can be

> determined on the basis of the context. The subject marker of a [*w*-] form indicates first person non-singular, and implicitly includes the other participant in the speech act, the hearer. […] [The suffix *-mu*] indicates first person. The participant which is deleted […] must be second person: it cannot be first person because the subject marker indicates first person; [it] cannot be third person (for in that case one would use *-nge*), nor can it be included in the subject referent (for in that case one would use [*-w*]). The subject of a *-mu* form has the role of patient; the deleted participant has the role of agent.
>
> (Smeets 1989: 351f)

Notice that Smeets does not consider this *w*-form a reflexive and places this *-w* on a different slot from true reflexive *-w*.

This terminology is summarized in (29):

(29) SMEETS'S ANALYSIS OF MAPUDUNGUN FINITE VERB FORMS

a.	subject	*-n*, *-mi*, etc.
b.	direct object	*-fi* (external=EDO) vs. *-e* (internal=IDO)
c.	dative subject	*-(m)ew* (3rd person agent) vs. *-Ø* (sSAP agent)
d.	agent	*-w* (1st person); *-mu* (2nd person)

Smeets does not analyze the paradigms in terms of direct and inverse but rather as an intricate system of macrorole marking (her agents and patients), her categories of subject and object, and role remapping. Her dative subject is markedly different from what is customarily called dative subject in descriptions of other languages.

Let me address some of the many issues that such an account raises. First, there is the problem of the exact position of suffixes in the template. Although the evidence is not conclusive and more research needs to be done in the area of relative ordering of the suffixes in the verbal complex, I tentatively follow Smeets and Salas here in treating forms like those in (30) as distinct. In (a), the reflexive suffix *-w* occurs before the progressive morpheme *-meke*, whereas in (b) the aspectual suffix follows the homophonous personal marker *-w*. This means that Arnold's "reflexive" form in (13) has to be accounted for differently.

(30) RELATIVE ORDERING OF SOME MAPUDUNGUN SUFFIXES

a. kewatu-**w**-meke-yiñ
hit-REFL-PROG-1pIND
'we$_p$ are hitting ourselves$_p$'

b. kewatu-meke-**w**-iiñ
hit-PROG-1A-1pIND
'we$_{d/p}$ are hitting you$_{s/d/p}$ / I am hitting you$_{d/p}$.'

A second important feature of Smeets's account are her notions of subject and object: since both GRs can be either A's or O's of transitive verbs, she postulates remapping inverses. But the most important part of Smeets's analysis is probably her treatment of nonfinite forms, which she calls verbal nouns. Although she acknowledges the relationship between the suffix *-fi* occurring on finite forms and endings like *-(fi-)lu*, she postulates a "transitive verbal noun" ending *–fiel*, which is to be regarded as synchronically non-compositional. By contrast, endings like *-am* are considered compositional, consisting of future *-a* and an "instrumental verbal noun suffix" *-m*. The element *-t* in the ending *-etew* is analyzed separately and said to be able to "denote the agent of an event" (278). A survey of some of her labels is given in (31):

(31) SMEETS'S ANALYSIS OF MAPUDUNGUN NONFINITE FORMS (SELECTION)

a.	*-n*	plain verbal nouns
b.	*-el*	objective verbal noun
c.	*-fiel*	transitive verbal noun
d.	*-t*	agentive verbal noun
e.	*-lu*	subjective verbal noun
f.	*-m*	instrumental verbal noun

It goes without saying that a thorough critique of Smeets's account lies beyond the scope of this study. In particular, whether the forms are best thought of as nonfinite verbs or as verbal nouns is not a central issue for our present purposes. What is more important is the fact that, in Smeets's analysis, the suffix *-fi* found on finite forms almost does not appear as such in the nonfinite paradigms. In the paradigm she gives for the *lu*-forms, those corresponding to MLS are suppletive *el*-forms ("for 1s→2s and 2s→1s one uses *-fiel*", pp. 285f), and so the only alternation pointing at a functional yield of *-fi* in the nonfinite forms is that between *-el* and *-fiel* in the X→3 configurations. The problem is that the *filu*-form in the MLS seems to have existed one hundred years ago (Augusta 1903: 185, Moesbach 1962: 136) and can be elicited nowadays without difficulty. Forms like *ramtu**fi**lu iñche* 'after I asked you$_s$' seem to be grammatical and idiomatic in Mapudungun even today.

As to the *el*-forms, Smeets says that "[w]hereas […] *-el* O[bjective] V[erbal] N[oun] […] denote a situation in which only one actant may be involved, *-fiel* and *-t* denote a situation in which more than one actant is involved" (1989: 271). However, examples like (32), where two participants are involved and an *el*-form is used without *-fi*, are not difficult to find in texts and are easily elicited. Together with the frequent cases where *-fi* is anaphoric, this suggests that the alternation between *-Ø* and *-fi* on nonfinite forms in non-local and mixed scenarios mirrors their distribution on finite forms.

(32) MAPUDUNGUN *el*-FORM (Salas 1992:170)

Ngeykurewe-ke-y		ka	machi		
move.sacred.post-HAB-IND		and	shaman		
tañi	llowtu-a-el	doy	newen	püllü	…
3POSS	receive-FUT-EL	more	powerful	spirit	

'The shaman moves [her] sacred post in order to receive a more powerful spirit …'

Even though a solution that does not treat *-fi* in the finite paradigm and *-fi* in the nonfinite forms alike is attractive, it is not supported by the data. Instead of a finite *-fi* and a nonfinite one disguised or fused in *-fiel*, we are left with a *-fiel* in the non-local and mixed scenarios and a different *-fiel* in the MLS. To make matters worse, the *filu*-forms appear to behave like the *fiel*-ones, but one of the MLS *filu*-forms (the one corresponding to the 2s→1s configuration) can also appear as *-e-lu-mew*, whereas the corresponding *-etew* is not attested covering this configuration.

2.4 The topicality analysis

Grimes (1985) suggested an account that built on earlier work by Salas but at the same time made an explicit link to direct / inverse analyses by arguing that Salas's focalization hierarchy was a special case of Comrie's topic-worthiness hierarchy and Kuno's empathy hierarchy. Leaving aside his features [±finite] and [±imperative] here, his non-binary features "limiting Mapudungun verb suffixes" (142) are summarized in (33):

(33) GRIMES'S ANALYSIS OF MAPUDUNGUN FINITE VERB FORMS

a.	[±participant]	SAPs (+) vs. 3rd persons (-)
b.	[±singular], [±plual]	s (+,-) vs. d (-,-) vs. p (-,+)
c.	[±topic]	primary (+) vs. secondary (-) referents
d.	[±speaker]	1st (+) vs. 2nd (-) persons
e.	[±definite]	
f.	[±inverse]	
g.	[±reflexive]	
h.	[±explicit]	
i.	[±minimal]	1s↔2s (+) vs. 1↔2(rest) (-)

That the features are non-binary means that they can take the values plus, minus, or undefined (with the latter not automatically meaning minus or unmarked). The suffixes appearing on finite forms share the feature

[+referential] but differ as to a number of other features.[12] The feature [±participant] distinguishes SAPs from 3rd persons, and combinations of the features [±singular] and [±plural] yield the three numbers of Mapudungun verbs. Primary referents (Salas's focal persons) are [+topic] and secondary referents (Salas's satellite persons) [-topic]. Actants that are [+participants] can be further differentiated as to whether they include the speaker ([+speaker]) or not ([-speaker]). Secondary referents are [+definite] if the speaker believes that the addressee can identify them and [-definite] otherwise—the latter case corresponding to *-nge*, as will become apparent shortly. A further secondary referent marked by *-w* is both [+definite] and [+reflexive]; 1st persons may be secondary referents in this framework, but only in reflexive configurations. The feature [±minimal] distinguishes the MLSs from the ELSs.

Crucially, there are non-reflexive satellites that can be [+inverse] "in the sense used for systems like Algonquian […] that distinguish direction of action" (1985: 147). Note that Grimes avoids using the term DIRECT because (i) it is potentially misleading considering other uses (e.g. direct object, direct discourse) and (ii) he follows DeLancey (1981a: 91) in assuming "that the inverse is universally the marked category in such morphologies" (p. 147). Distinguishing the hierarchies of topicality (+topic > -topic) and thematicity (roughly, A > O), Grimes says that

> [t]he hierarchy of topicality is fixed in Mapudungun, but the thematicity may be inverted from the direct flow of attention [implying that a participant of higher topicality and higher thematicity, the primary referent, acting on another participant of lower topicality and lower thematicity, the satellite, FZ]. When it is, the direction is marked; the satellite, which can never be the topic by definition, is [+inverse] in that it acts on the topically more central primary referent. […] [W]henever two referents are involved in an action, the one higher in the thematic hierarchy is treated as [+inverse] if it is the satellite in Mapudungun morphology, and the lower one is treated as [-inverse] or direct if it is the satellite.
>
> (Grimes 1985: 148f)

Unsurprisingly, Grimes follows earlier work by Salas in postulating a hierarchy 1 > 2 > 3 definite > 3 indefinite. This allows a 1st person primary referent to go with either a 2nd or 3rd person secondary referent but a 3rd person primary referent to go only with another 3rd person secondary referent, either definite or indefinite. Grimes summarizes his view in the following terms:

---

[12] Grimes posits the feature [±emphatic] for the 3rd person number markers mentioned in §1.1. I will disregard this feature for the present purposes.

> Some languages, and here Mapudungun may be one of the clearer ones, have a referential agreement pattern that revolves around topic-worthiness: whenever the speaker is involved in an expression in any way, he or she is automatically the topic, as the most immediately accessible referent. When the speaker is not connected with the expression but the addressee is, then it is the addressee who is the most topic-worthy referent on the scene, regardless of what else might be referred to. If neither speaker nor addressee is part of the expression, then one of the other referents that is not a participant in the speech act, but that has been established and is accessible for the addressee to identify, is the topic.
>
> (Grimes 1985: 158)

Equipped with the features explained above and some redundancy rules, Grimes proposes the following values for the verbal affixes corresponding to secondary referents (those corresponding to primary referents being those listed in Table VII-6 and being [+topic]):[13]

Table VII-6
SECONDARY REFERENT SUFFIXES ACCORDING TO GRIMES (1985)

	topic	participant	minimal	inverse	definite	reflexive
-nge$_5$	(—)	—		(+)	—	
-w$_8$	(—)	±			(+)	+
-e$_{23}$	—	+	+		(+)	
-mu$_5$	—	+	—	+	(+)	
-w$_5$	—	+	—	—	(+)	
-e$_{23}$*-…-(m)ew*$_{28}$	—	—		+	+	
-fi$_{23}$	—	—		—	+	

Let me summarize the hallmarks of Grimes's analysis. First, there is a topic-worthiness hierarchy determining which actants may appear marked on the finite verb, topical actants being marked as primary referents and nontopical actants as secondary referents. Second, there is not a direct or inverse morpheme alternation but rather a [±inverse] feature of person markers. Third, additional features like [±minimal] and redundancy rules are needed to explain the forms occurring in local scenarios. A paradigm of personal markers in the indicative along those lines is given in Table VII-7 below (number distinctions in the 3rd person are immaterial to our discussion and have been omitted):

[13] The subindices to the right of the affixes refer to Grimes's templatic positions from left to right.

Table VII-7
MAPUDUNGUN PERSONAL MARKERS ACCORDING TO GRIMES (1985)

	Set I: primary	Set II: secondary
1s	*-n*	—
1d	*-iyu*	—
1p	*-iiñ*	—
2s	*-ymi*	*-e* (MLS) / *-w* ~ *-mu* (ELS)
2d	*-ymu*	*-w* ~ *-mu*
2p	*-ymün*	*-w* ~ *-mu*
3DEF	*-Ø*	*-fi* ~ *-e-…-(m)ew*
3INDEF	—	*-nge*

The allomorphy in the persons that may appear as either primary or secondary referents is determined by the hierarchy, [-inverse] markers appearing on the left and [+inverse] ones on the right.

Excursus: The topicality problem

Note at this point that Grimes's morphology-centered approach does not provide an independent definition of topicality. There are two sets of personal endings, and whatever actant is marked by Set I is the topic (Set I markers are also the default ones used with intransitive predications). In other words, whatever actant is marked by Set II is clearly not the topic. Consider a passage like the one given in (34). In order to allow his two nephews to marry his daughters, an old man asks them to perform some difficult tasks. The second task they are to perform is to fell an oak, a command he gives as follows:

(34) MAPUDUNGUN TOPICS IN DISCOURSE I (Salas 1992:245)

a. Ka katrü-l-mu-a-n ta kiñe koyam.
and cut-APPL-MU-FUT-1sIND PART one oak
'You$_d$ will fell an oak for me as well.'

b. Katrü-l-mu-a-n ta kiñe aliwen
cut-APPL-MU-FUT-1sIND PART one tree
katrü-pe-ke-no-el mari-chi rume.
cut-CERT-HAB-NEG-EL ten-times even
'You$_d$ will fell a tree for me that has not been felled even after ten attempts.'

c. Katrü-l-mu-me-a-n tüfa mew, tantu-l-mu-a-n.
cut-APPL-MU-AND-FUT-1sIND here PPOS fell-APPL-MU-FUT-1sIND
'You$_d$ will go and fell [it] to me there, you will fell [it] for me.'

Without any independent criteria to define topicality, every finite verb form takes the 1st person marker *-n*, so by definition the 1st person is topical in the whole passage. Nevertheless, the 1st person here is invariably a beneficiary licensed by the applicative *-l*; the actors and undergoers are the 2nd person dual and the oak tree, respectively. The clauses preceding and following this direct discourse are *feymew dew iltungelu engu* 'after they$_d$ had been given some food' and *pingeyngu ka yengeyngu* 'they$_d$ were told and [then] led [there]', which comes as no surprise since the story is about the two brothers. The ensuing passage describes how they ask for a miraculous axe to descend from heaven and help them accomplish the titanic task. It might well be the case that the topic switched from the 3rd person plural in the narrative to the 1st person singular in the direct discourse, but what evidence is there of such a switch apart from verb agreement? Why not keep the same referents as topical (i.e. 2nd person dual) or even let the new referent, viz. the oak tree, become the center of attention in the command? According to Grimes, the language has grammaticized sensitivity to the topicality hierarchy in such a way that grammar does not permit a lower actant to become topic if there is a higher actant present.

In a later passage in the same text by Pascual Coña from which the passage in (18) came, the narrator comments on his deceased brothers and sisters after naming and commenting on a number of relatives, including his brother, nephews and nieces. Before turning to some siblings he knew well, he says:

(35) MAPUDUNGUN TOPICS IN DISCOURSE II (Coña 1930:20)

a. Ka-ke-lu ina-pa-lu, fey kim-la-fi-ñ
other-ns-LU follow-CIS-LU 3 know-NEG-3O-1sIND
ñi üi-ye-nge-fel kam ñi üi-ye-nge-no-fel,
3POSS name-p-PASS-3O:EL or 3POSS name-p-PASS-NEG-3O:EL
fente pichi-ke-lu la-ye-y,
much litle-ns-LU die-p-IND
meli-chi kechu-chi, newe kim-we-la-fi-ñ.
four-times five-times very know-already-NEG-3O-1sIND
'The others that followed, I do not know whether they were named [at all] or not, they$_p$ died when they$_p$ were very young, there were four or five [of them$_p$], I do not remember any more.'

b. Ka-ke-lu fütra-ke trem-fu-y;
other-ns-LU big-ns grow-RI-IND
feyengün küme kim-pa-fi-ñ.
3p well know-CIS-3O-1sIND
'Others grew [old]; these$_p$ I know well.'

Some predicates in this passage have a 1st person as morphological primary argument (*kimlafiñ* 'I do not know them$_p$', *kimwelafiñ* 'I do not know it anymore' and *kimpafiñ* 'I know them'); others show a 3rd person instead (*l̲ayey* 'they$_p$ died' and *tremfuy* 'they$_p$ grew'). The primary arguments of all nonfinite verb forms are 3rd persons, viz. *ipalu* 'having followed', *ñi üiyenge(no)fel* 'their$_p$ (not) having been named' and *pichikelu* 'being little'. It seems intuitive enough to me that the passage is about the narrator's siblings, some of which were unknown to him because they died as young children whereas he got to know those who grew old. He explicitly contrasts those he did not get to know with those whose lives he is about to comment on, and it is surely odd to postulate that the topic switches back and forth from 1st to 3rd person in the passage. Without Grimes's theory, I would argue it would be as unmotivated in the Mapudungun text as in the English translation to say the 1st person is what is being talked about.

As to Salas's term "focus", Rivano (1991: 107) remarks that it "does not refer to information structure. Rather, it stands for what is morphologically or grammatically primary". It is apparent that Grimes has a similar idea in mind with regard to the term "topicality", and therefore much of what has been said can be rephrased in terms of primary and secondary argumenthood—which may, of course, be directly linked to topic-worthiness but need not be linked to actual topicality.

2.5 Summary of analyses of Mapudungun

The analyses of actancy marking on Mapudungun verb forms discussed so far share one important feature but differ with respect to several points. All of them have some trouble in explaining the finite local scenario forms economically, which is certainly no surprise even after a cursory inspection of the finite paradigm. They differ as to whether they adopt a seemingly traditional approach (Arnold's grammatical relations and middle forms), an arguably novel one (Salas, Grimes), or an account that aims at explaining all forms found in finite and nonfinite paradigms but faces some problems in the details (Smeets). Another important difference is whether the analyses include the notion of direction (Arnold, Grimes) or not (Salas, Smeets). Moreover, [+inverse] can be seen either as the only value of a morpheme (Arnold) or as one of several features that may be present in given affixes (Grimes). Finally, although those authors addressing an indexability hierarchy agree regarding its form (1 > 2 > 3' > 3"), they postulate different ways in which it is reflected by the morphology: it either defines what is inverse and what is direct (Arnold, Grimes) or determines which actants will be marked as focal persons and which as satellites (Salas). These differences and similarities are presented in Table VII-8 below:

Table VII-8
ANALYSES OF MAPUDUNGUN MORPHOSYNTAX

	Arnold	Salas	Smeets	Grimes
Remapping	yes	—	yes	—
Direction	yes	no	no	yes*
Hierarchy	→direction, GRs	→"focality"	(→GRs)	→"topicality"

Which of these approaches is to be preferred, or which elements of the individual analyses are essential for an account that does justice to the language-specific distinctions? First, it is clear that simple explanations of the nonfinite paradigms are to be avoided; the variation in morphological make-up, the differences with regard to personal marking by means of possessives, and the existence of competing paradigms show that several principles are at work. Second, the quest for pivots is not as advanced as with Algonquian languages, although it does seem to yield less conflicting results. Control of the directional elements is apparently sensitive to agentivity but not to grammatical relations, but the rest of the phenomena surveyed (word order, WH-words) suggest that a remapping inverse is to be regarded as a serious working hypothesis. Third, insofar as a strict "topicality" analysis does not provide an independent definition of that very pragmatic notion—in fact, as long as information structuring in natural language remains a comparatively recalcitrant area—, its circularity and failure to take syntactic phenomena into account render it less attractive.

Summing up, I believe our current knowledge about Mapudungun linguistic structures supports an account in terms of both hierarchical alignment (the indexability hierarchy governs the access to syntactic functions) and morphologically marked direction. Section 3 below characterizes these two dimensions in greater detail.

3. Direction in Mapudungun[14]

Unlike in the preceding chapters, remarks concerning formal aspects of direction will be addressed first in what follows, because the functional yield postulated for many suffixes depends on that particular syntactic analysis.

[14] Section 2 sketched and discussed four descriptions of inversion in Mapudungun that have been proposed in the literature. I omitted previous work by Salas because his 1992 book can be regarded as the product of yearlong reflection on the subject, and the present study is not primarily concerned with historical aspects of his work. Also omitted from this survey was Fontanella (1967), the first componential analysis of Mapudungun personal verb morphology.

3.1 Formal aspects

Locus of marking

The personal markers given in Table VII-1 at the beginning of this chapter (*-n* 1s, *-mün* 2p, *-yu* 1d, etc.; henceforth PM) are suffixes occurring toward the end of the verb, and the formants *-fi*, *-e*, *-mu*, *-nge* and *-w* are suffixes that appear closer to the verb stem. The element *-(m)ew* is apparently considered an enclitic by those speakers who write it separately from the rest of the verbal complex, but since it loses its initial consonant when the referent of the personal marker is 1s or 3s and it can carry the primary word stress when it is not reduced to *-mu~mo,* it has probably become a suffix. It never appears in any other position, and nothing can intervene between 3rd person Ø or the other markers and *-(m)ew*. Therefore, and given that there is no dependent marking that could be regarded as interacting with any of these verbal formants, Mapudungun marks everything on the head of the clause. There is no additional marking like the "quasi-obviative" proposed by Klaiman for Tanoan (Chapter VI), even though the obviation status of nominals is a covert category.

Interaction with grammatical relations

As mentioned when Arnold's (1994, 1997) view was addressed in §2.1 above, Mapudungun morphosyntax apparently treats some arguments alike:

Table VII-9
MAPUDUNGUN GRAMMATICAL RELATIONS ACCOUNT

	A	S	O
Intransitive and passive forms	—	[PM]	—
Direct forms	[PM]		(*-fi*)
Inverse forms	*-w/-mu/-(m)ew*		[PM]

Table VII-9 shows how the morphology of the language operates, but recall that Arnold advances syntactic arguments as well. Crucially, she postulates a remapping of the macroroles in such a way that the subject and object are actor and undergoer with direct forms but undergoer and actor in inverse clauses. As we have seen, such an account is only superficially traditional in that the notions subject and object are seldom understood this way. If Arnold is right and *nge*-forms are best understood as detransitivized passives, then her case for remapping inverse forms is arguably strong. Observe that this account differs from Rhodes's inverse-as-passive analysis for Central Ojibwa (Chapter III) in that no passivization and chomeur advancement processes are postulated.

However, like Rhodes's proposal for Central Ojibwa, such an analysis of Mapudungun has far-reaching consequences. The PMs are subject markers, *-nge* is a passive suffix, and *-fi* is a 3rd person primary object marker reserved for those objects high in animacy / definiteness in direct clauses. Inverse clauses are characterized by the PMs and a choice of the suffixes *-e*, *-mu*, and *-w*, and by *-(m)ew* with 3rd person actors. Nonfinite clauses, as we have seen, are aberrant in a number of ways.

3.2 Functional aspects

Domains

The mixed domain is straightforward. Whenever SAPs act on 3rd persons, the actor is marked via the PMs, which are unspecified for role; the undergoer is left unexpressed or appears as *-fi* if it is especially individuated, definite, animate, or the like. When 3rd persons act upon SAPs, the same PMs are used to mark the undergoer; the actor appears as *-(m)ew* at the right end of the verb, and the verb is additionally marked by means of *-e*. This holds for both finite and nonfinite clauses, with the proviso that the latter substitute their characteristic endings *-el*, *-lu*, etc. for the PMs appearing on the finite forms. Non-local scenarios are analogous to the mixed domains, but recall that SAP↔3 interactions do not allow any alternation between direct and inverse clauses whereas 3↔3 configurations do.

By contrast, local scenarios are far from well-behaved. One possibility consists in postulating an inverse morpheme with allomorphs *-mu* for 2→1R, *-w* for 1→2R and *-e* elsewhere with the additional specification of special PMs in the 1→2 interactions, viz. 1d for the MLS and 1p for the ELSs. Consequently, all local forms would be inverse while mixed ones would be either direct or inverse depending on the interaction. All local nonfinite forms would be direct, and local inverse ones would show a zero allomorph, whereas mixed forms in non-local scenarios would be parallel in finite and nonfinite clauses.

If the morphology of nonfinite verb forms is more archaic and the suffixes *-e*, *-mu* and *-w* entered the paradigms via finite forms, then *-e* is best thought of as an inverse in mixed and non-local scenarios (and the indexability hierarchy was originally SAP > 3' > 3" with an orthogonal local section). Alternatively, direct can be considered the unmarked member of the opposition, inverse being reserved for the interaction [low]→[high]. But if the morphology of nonfinite verb forms is comparatively innovative, then *-e* was an unmarked inverse, direct being reserved for the [high]→[low] configurations. Alternatively, if we draw a distinction between topic-worthiness and actual topicality, *-e* might have been used to mark states of affairs in which topic-worthy actants (all SAPs, and high 3rd persons in non-local scenarios) were acted upon (cf. Zúñiga 2001).

As I mentioned when sketching Smeets's analysis, there is an alternative to postulating a reasonably transparent nonfinite paradigm and a fairly messy finite one. To my mind, it is at least equally plausible to regard the mixed and non-local scenarios of both finite and nonfinite forms as well-behaved and the local domain in both paradigms as the problem area. The MLSs have *-e* on finite forms and *-fi* on nonfinite ones, and the ELSs are parallel with the proviso that *el*-forms take *-fi* and show a variation absent in the finite paradigm. Neither account is capable of explaining the distribution of *-fi*, but it might well be the case that *-fiel* has become monomorphemic in the local scenarios that obligatorily take this suffix. Presumably, *-e* did not fuse with anything in the finite paradigm because of the productive paradigmatic alternations after that suffix in the template.

Albeit incomplete, Arnold's hypothesis seems to me to be the best explanation of the present-day situation: An original hierarchy SAP > 3' > 3" governed the access to primary argumenthood and worked together with a specification of direction stipulating that local interactions counted as inverse and were marked by *-e* or zero (this last option cooccurring with the actor markers *-w* and *-mu* in a different slot). This null hypothesis could include zero-marked nonfinite local forms. Then, due to unknown reasons, an underlying drive toward an additional ranking 1 > 2 disturbed the morphosyntax of the corresponding verb forms and additional, hitherto also unknown, factors were responsible for different outcomes in the finite and nonfinite paradigms.

If such a development is close to what actually happened, both *-e* and *-fi* have become something different and labeling them 'inverse' and '3O', respectively, is a reconstructed etymology rather than a synchronic account of their current yield. If the evolution of this part of Mapudungun grammar was substantially different from what has been hypothesized here, I must admit I am at a loss as to what to call these formants.

Focality

The PMs mark reference but not macrorole, since they may refer to either the agentive or the patientive actant. The nonfinite affixes *-el*, *-lu*, etc. mark neither reference nor macrorole. The suffixes *-fi* '3O' and *-(m)ew* '3A' are non-focal markers, and also *-mu* and *-w* are probably best seen as non-focal 2A and 1A markers, respectively. Finally, and bearing in mind the quirks mentioned when addressing the domains, *-e* would be a global low-focal inverse marker.

Chapter VIII
Conclusions

> Books do not exhaust words, nor words thoughts.
> — Chinese proverb

Readers previously unacquainted with most of the languages discussed in the preceding chapters may want to take a longish break and ponder on the crucial statements, reconsider the available evidence, and/or consult primary sources. Scholars already familiar with some or most of the data may want to think over the central claims of this study, viz. (i) that inverse clauses may be quite dissimilar things in different languages with regard to their syntactic import, and (ii) that direction is best understood not as if it were in competition with voice but as a functional category that may be expressed by it.

I have written the following pages with all these readers in mind, therefore providing a summary of both the main findings and their significance (§1). Then (§2) I address the question of what we have learned and what lies ahead.

1. Summary of the languages discussed

This section provides a comparison between the systems surveyed in Chapters III through VII in terms of the functional and formal aspects of direction (§1.1 and §1.2 respectively), voice and inversion continua (§1.3), and direction in general (§1.4).

1.1 Functional aspects

Focality is interesting from a diachronic point of view, since, for instance, part of the evolution of the Algonquian marker *-*i* was from a non-focal 1st person undergoer marker to a low-focal '2→1' local direction marker. Cross-linguistic comparison based upon focality of the markers or constructions alone is not likely to yield highly illuminating results, however. I have used focality here rather as an analytical tool to track extensions or reductions and to better describe the paradigmatic and syntagmatic relationships.

With regard to the direction domains, the languages discussed fall into four types, as can be shown in Table VIII-1 below:

(A) Most languages show global direction.

(B) Kutenai displays non-local direction only.

(C) Nez Perce has direction exclusively in the local domain.

(D) Kiowa shows core direction without non-local direction, but the local domain is admittedly difficult to categorize in clear-cut terms.

Since the language sample is not representative of anything, no claims as to the distribution or occurrence of these types are made here. Nevertheless, the situation found in Kiowa appears to be comparatively rare in that most languages reported as showing inversion suggest a tendency toward an implicational hierarchy core > non-local: non-local direction can be found alone (e.g. in Kutenai), but if core direction is present, then non-local will be as well. In other words, if a given language marks the opposition between SAP→3 and 3→SAP interactions, it will utilize marking possibly, albeit not necessarily, derived from or identical to it in order to mark the opposition between 3'→3" and 3"→3' configurations. Kiowa verb paradigms seem to be yet another exception.

Table VIII-1
DIRECTION DOMAINS IN THE LANGUAGES SURVEYED

	Non-local (3↔3)	Core (SAP↔3)	Local (SAP↔SAP)
Algonquian			
• Plains Cree	Sem. / prag. / synt.	Yes	Yes
• Miami-Illinois	Sem. / prag. / synt.	Yes	Yes
• Central Ojibwa	Sem. / prag. / synt.	Yes	Yes
Kutenai	Sem. / prag. / synt.	—	—
Sahaptian			
• Umatilla Sahaptin	Pragmatic	Yes	(Yes)
• Nez Perce	—	—	Yes
Kiowa-Tanoan			
• Arizona Tewa	Semantic / pragmatic	Yes	Yes
• Rio Grande Tewa	Semantic / pragmatic	Yes	Yes
• Picurís	Semantic / pragmatic	Yes	Yes
• Southern Tiwa	Semantic / pragmatic	Yes	Yes
• Kiowa	—	Yes	(—)
Mapudungun	Semantic / pragmatic	Yes	Yes

These findings do not contradict but rather complement Gildea's (1994) "cycle of inverse evolution".[1] According to his proposal, languages can have inverse voice only (e.g. Kutenai), then integrate the obligatory alignment part (e.g. Algonquian), further get rid of the pragmatic dimension (the Tibeto-Burman language Nocte is Gildea's example here) and eventually either dispense with direction altogether or end up with what he calls a split system (characterized by inverse voice and inverse alignment being marked by different, unrelated morphosyntax; Gildea's examples here are Carib, Maasai, and Umatilla Sahaptin). Such an evolution is admittedly one of several possibilities, and only a great deal of morphosyntactic reconstruction would allow the analyst to favor one in particular or revise the cycle more radically.

Unfortunately, not much has been published on the diachronic development of hierarchical systems since Gildea's article, in part due to the scarcity of available data. In his words, "the most insightful typological studies must also speak to the origins of the types described" (1994: 222). Although the present study is not primarily concerned with either etymologies or development paths, some remarks have been made when discussing the individual languages. The origin of the Algonquian inverse marker **ekw* is still rather tentatively reconstructed (see Proulx 1985 for Proto-Algic forms), and it is not at all certain whether Algonquianists will ever succeed in providing anything else than useful and suggestive educated guesses. By contrast, it seems safe to say that some low-focal and high-focal local direction markers in Algonquian evolved out of non-focal object or undergoer markers—it is not implausible to postulate '3O' as the original yield of the direct morpheme **-ā*. The origins of the Kiowa-Tanoan personal prefixes are more or less reconstructed (Merrifield 1959, Watkins & McKenzie 1984) and allow a similar conclusion: original actor and undergoer markers are combined and fused in such a way as to render the present-day portmanteaus, some of which contribute to express direction. The Sahaptian original plural morpheme *pa-/pE-* is different, but we saw in this language family the interesting evolution of the nominal case system drifting toward ergativity via direction marking.

1.2 Formal aspects

Locus of marking

This formal aspect might be considered an analytical tool parallel to focality and

[1] Gildea's (1994) framework was tangentially addressed in Chapter II. As was noted there, his terminology is not equivalent to the one used here since inverse voice corresponds to pragmatic non-local direction while inverse alignment covers obligatory direction in general, which is typically found in the core and local domains but can be semantic non-local as well.

therefore less interesting for cross-linguistic comparison than for language-internal (or family-internal) description. However, since the connection between inverse systems and the head-marking type is customarily portrayed as strong, the picture arising from my limited sample is not void of interest. Consider the summary given in Table VIII-2:

Table VIII-2
DIRECTION LOCUS IN THE LANGUAGES SURVEYED

Head-marking	Double-marking	Dependent-marking
Algonquian	Tanoan	Umatilla Sahaptin*
Kutenai		
Nez Perce		
Kiowa		
Mapudungun		

For most languages, the fact that direction marking appears on the head of the clause is uncontroversial. In the four Tanoan languages discussed in Chapter VI, the double-marking pattern arises from considering the obligatory passivization strategy a reflex of the category of direction. The analysis not in terms of passive-or-inverse but rather inverse-through-passive naturally leads to such a locus of marking. As already mentioned in Chapter II, this study does not try to re-analyze as many passives as possible in order to have more inverses, but if some otherwise prototypical passives are sensitive to an indexability hierarchy, then direction is to be seen as present and as expressed through a double-marking pattern. The most complex case is Umatilla Sahaptin (Gildea's "split system"), which combines several types of marking locus and has been listed here as a representative of the dependent-marking type both in order to draw special attention to it and because it is core direction that is expressed by the case system. Pragmatic direction is marked both by a verbal prefix and by case, so the pattern here is double-marking but not linked to passivization. Finally, whatever is present of local direction is marked both on the head and by means of a detached clitic.

Another remarkable finding bears relation to Gildea's observation that "[o]nly in a very few languages are both inverse voice and inverse alignment coded with the same morphosyntax (I know of only the Algonquian family)" (1994: 222). Whereas it is interesting to observe that different domains become marked in different ways, Mapudungun appears to be parallel to Algonquian in that both core and non-local direction are marked alike. Not only do both systems use exclusively a head-marking strategy but also the morphology

involved is the same—in fact, it is Plains Cree that deviates from this absolute identity by showing the allomorphy *-ā* ~ *-ē* 'direct' in the independent order. Both Gildea's "integrated inverse" type (represented here by Algonquian and Mapudungun) and his "split system" (Umatilla Sahaptin) are in need of explanation and ought not to be considered mere parochialisms or completely unmotivated historical accidents.

Grammatical relations

Even though the much more complex and problematic area of alignment and grammatical relations yields less conclusive results than the other aspects considered in this study, some useful summarizing remarks can be made.

First, there appear to be clear extreme cases. The description of Sahaptian languages does not need to resort to postulating hierarchical alignment since the simple S/A and S/O pivots seem to suffice. By contrast, Kiowa-Tanoan languages and Mapudungun cannot be adequately described without the notion of hierarchical alignment. In Tanoan, an indexability hierarchy governs the choice between active and passive. In Kiowa and perhaps also Mapudungun, specialized clause types are required by considerations related to an indexability hierarchy. Observe that it is not necessary to answer the question of how many basic and how many derived clause types are to be postulated, since this issue bears relation to modeling the interaction rather than to simply acknowledging it. Alternation between clause types, whether they are basic or derived, cannot be described by using S/A and S/O pivots alone in such languages.

Second, at our present stage of knowledge and with our present-day analytic capabilities Algonquian languages and Kutenai emerge as problematic yet highly interesting cases. Neither formalist nor functionalist currents of thought have been successful in providing a comprehensive account of these languages in a way comparable to how they purportedly do the job with Indo-European tongues. Kutenai seems to be a normal non-hierarchical language in the local and mixed domains, but it apparently developed Algonquian traits in the non-local domain due to contact. Its obviation system is virtually parallel to the one found in Algonquian, which is hardly an accident, and the interesting point here is that not only the morphology but also the syntax of non-local clauses is similar. Is there an opposition between two clause types in Kutenai, the direct and the inverse mapping of macroroles onto grammatical relations? If there is such an opposition in Algonquian, what is the status of the different, to some extent competing, pivots found for different constructions? Is Central Ojibwa more advanced in this respect than Plains Cree, the former showing this remapping already while the latter retains a system working with S/A and S/O pivots?

I cannot possibly answer these questions in a satisfactory way here. Work by

linguists with an active command of these languages, be it the specialists whose work I have consulted, native speakers with some training in the sort of linguistics interested in these puzzles, or some other kind of scholar, is needed in order to make some progress in this area. However, I address this issue from a slightly different perspective in Section 2 below.

Hierarchies

The study of both some Algonquian affix positions and the Kiowa conflations in the personal prefixes suggests that the issue of indexability hierarchies is more complex than originally envisaged—at least more complex than depicted in Chapter I. Not only is one detailed cross-linguistic hierarchy likely to be rather an impressionistic oversimplification than a useful analytic tool, but also one language-specific hierarchy may miss the point in some cases. Just as the morphosyntax of a given language may show different pivots in different realms, it might be the case that different phenomena are governed by different underlying hierarchies.

Of course, some of the riddles encountered here can have arisen due to phonological accidents blurring affixes that were formerly well-behaved and are therefore of more marginal interest than those parts of the morphology reflecting true underlying principles. Since such phenomena are far from infrequent in the world's languages, aberrant hierarchies might be dismissed as epiphenomenal and in that sense somewhat spurious. However, the evidence suggests that the hierarchy governing the personal suffixes in some Algonquian languages and the admittedly highly idiosyncratic Kiowa prefixes are not merely mirages originating from a hyperstructuralist analysis, even though it must be acknowledged that the different Algonquian hierarchies appear to have quite different statuses in the grammar of the languages. Further research shall tell us more about the import of such intriguing rankings.

1.3 Two continua

The structural parameters of detransitive voices in Givón's framework (Chapter II) are not set up in such a way that a continuum—a long-time favorite in typological studies—emerges. Nevertheless, other approaches to voice in general and inversion in particular do feature such a cline, and the present subsection briefly discusses two of them: Croft's (2001) model, a theory of voice, and Fadden's (2000) inverse continuum.

The voice continuum: Croft (2001)

The main reason why I chose not to survey this framework earlier on was that I assumed as a working hypothesis the existence of some sort of language-specific grammatical relations or similar construct. In Croft's view, grammatical relations both in the traditional sense and according to more recent formalist or functionalist frameworks are explicitly superfluous (2001: 5f). Suffice it to say here that his "coded dependencies" (roughly, coding properties) encode relations between semantic components and syntactic elements ("symbolic relations") and are better seen as semantic than as syntactic; therefore, they are not taken to necessarily suggest the existence of grammatical relations. Crucially, Croft claims that (i) the relations among syntactic elements ("syntactic relations") are superfluous but (ii) the relations between those elements and the particular constructions in which they occur ("syntactic roles") are not. A detailed account of behavioral properties according to Croft's Radical Construction Grammar (RCG) lay beyond the scope of the present study because it should have included a discussion of advantages and disadvantages of postulating more traditional syntactic relations. It goes without saying that such a discussion would have been a completely different book.[2]

However, a brief mention of Croft's approach is useful at this point because it sheds a different and interesting light on the findings summarized above. Croft (2001: 283f) analyzes a number of constructions in some languages from Europe, Austronesia, Australia, and Native America, based upon the following parameters: (i) Agreement and case of the actor, (ii) agreement and case of the undergoer, (iii) transitivity of the verb form, and (iv) identity of the verb form in question with the "basic" verb form.[3] Most constructions surveyed in the present study can be placed in what Croft calls a "syntactic space" as shown in Table VIII-3 and visually represented in Figure VIII-1 below. In Figure VIII-1, the arguments' coding properties are represented in the axes; intransitive inverses appear in italics, and inverse verbs indistinguishable from direct predicates are underlined. The symbols α and β represent the prototypical (i.e. English-like) active and passive constructions, respectively.

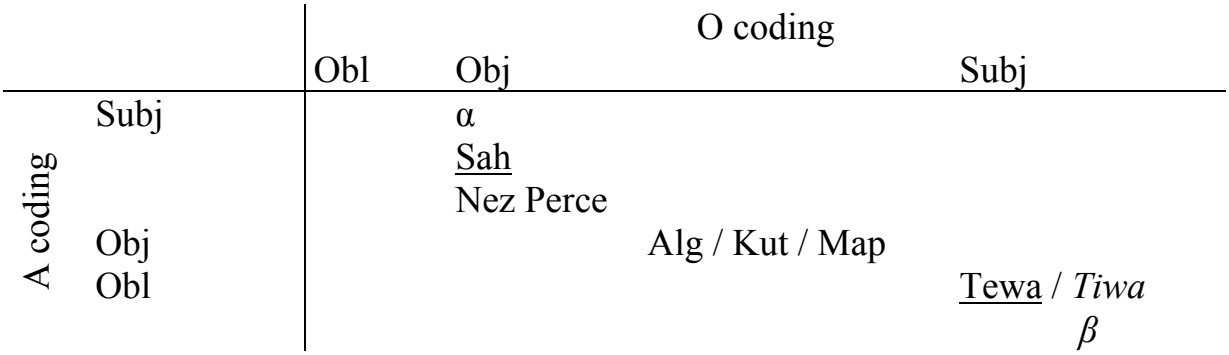
[2] Readers interested in how Croft's model deals with coding and behavioral properties of NPs without postulating syntactic relations are referred to his 2001 book, especially Chapter 6 therein.

[3] For our present purposes, the basic verb form is simply the direct active form of the predicate. However, observe that the canonical verb form, usually identified by means of text frequency, does not necessarily have to correspond to the English active (Croft 2001: 285).

Table VIII-3
SYNTACTIC SPACE OF LANGAUGES SURVEYED

	A coding	O coding	Transitivity	Identity
Algonquian	Obj-like	Subj-like	Yes	No
Kutenai	Obj-like	Subj-like	Yes	No
Umatilla Sahaptin	special	Obj	Yes	Yes
Nez Perce	Subj	Obj	Yes	No
Tewa	Obl	Subj	Yes	Yes
Tiwa	Obl	Subj	No	No
Mapudungun	Obj-like	Subj-like	Yes	No

Figure VIII-1
APPROXIMATE VISUAL REPRESENTATION OF THE INVERSE CONSTRUCTIONS IN CROFT'S VOICE CONTINUUM (SYNTACTIC SPACE)



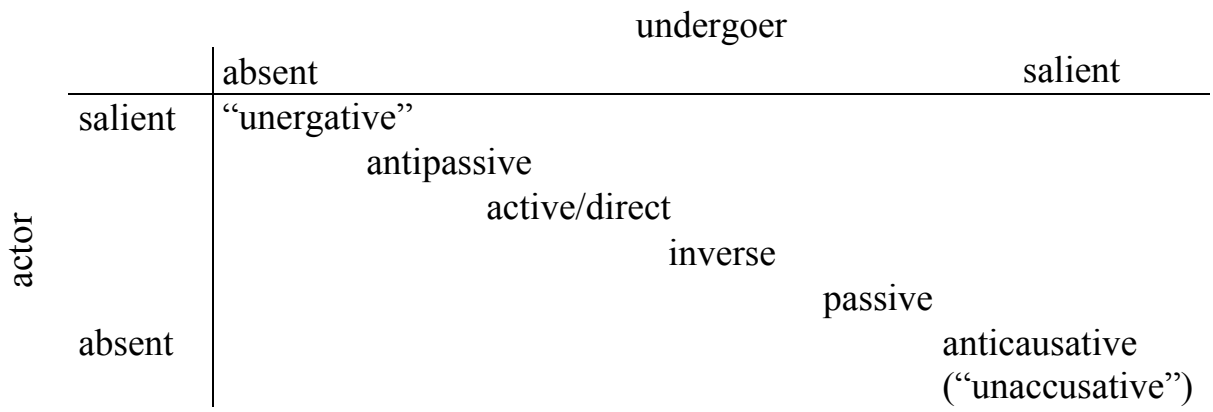
The Algonquian languages have been grouped together since they do not differ with regard to Croft's parameters, and so have been the two Tewa and the two Tiwa languages discussed, respectively. In this view, Algonquian inverse constructions are classified as showing object-like coding properties for A's and approximately subject-like coding properties for O's (I have glossed over the obviation marking system here), and they are both transitive and distinct from the direct verb form because of the theme sign. Kutenai yields the same results as Algonquian because this approach does not consider direction domains. Nez Perce local direction consists merely of the verbal suffix *-im* in the inverse, so all other parameters are shared by inverse and direct constructions. Umatilla Sahaptin shows dependent-marking core direction that leaves the O-marking unchanged but alters the A-marking in the inverse, and the verbal marking for the other two domains barely modifies the actants' coding properties. Mapudungun is basically like Algonquian and Kutenai in this respect, but Kiowa is more difficult to classify than the other languages and has been omitted here. The Tanoan languages, on the contrary, are straightforward. The Tewa inverse differs from its Tiwa counterpart in that the former is transitive

and is formally like the direct, whereas the latter is a detransitivized passive.

Such an approach yields interesting cross-linguistic results when more languages and especially other constructions like agentless forms or non-prototypical passives are included, because then the lower left and upper right areas in Figure VIII-1 are no longer empty. In addition, gradual syntactic change can be explored with this framework (Croft 2001: 314). For our present purposes, however, rather than revealing aspects of the constructions hidden hitherto, it provides a graphic representation of what we already know: Sahaptian direction is virtually orthogonal to alignment and voice, while Tanoan languages choose a passive or passive-like strategy to encode the inverse. Unfortunately, the more interesting cases on syntactic grounds (Algonquian, Kutenai, Mapudungun) remain somewhat underspecified in the middle field of the voice continuum.

By glossing over the details of language-specific coding mechanisms and including intransitive constructions, we can proceed to what Croft calls "conceptual space" as depicted in Figure VIII-2 below (Croft 2001: 317):

Figure VIII-2
CROFT'S CONCEPTUAL SPACE FOR VOICE AND TRANSITIVITY



Those regions of conceptual space where one of the arguments is absent correspond to intransitive constructions and are labeled "unergative" and "unaccusative" (the former only with an agentive actant, the latter with a patientive one; both appear in double inverted commas in Croft 2001). The other positions correspond to two-participant situation types that may be syntactically transitive or intransitive, and it is here that the constructions found in the twelve languages discussed in this study are to be placed. Note that in this view the term "inverse" is opposed to "passive" and the other labels based upon, roughly, a parameter of prominence that can be identified morphosyntactically

and interpreted in terms of discourse, but that the boundary between transitive and intransitive is not sharp.

Observe that one might build a case in favor of the cognitive-functional need of a cline like the one in (1) outside Croft's RCG framework, merely combining terminology and ideas by both Dixon & Aikhenvald (2000) and Givón (2001):

(1) TRANSITIVITY CLINE

a.	**A**	—	("unergative")	**he broke*
b.	**A**	(O)	demotional antipassive	*?he broke (something)*
c.	**A**	O	active-direct	*he broke the vase*
d.	A	**O**	active-inverse	*the vase, he broke it*
e.	(A)	**O**	demotional passive	*the vase was broken (by him)*
f.	—	**O**	anticausative	*the vase broke*

The semantic argument structure is represented in (1) by the presence and/or the absence of actors and undergoers from the clause: optional adjuncts appear in brackets and suppressed arguments are represented by a dash. The pragmatic structure is symbolized by topical arguments appearing in boldface (corresponding to Croft's conceptual saliency and morphosyntactic privileged coding), and the English examples are intended as an orientation only.

In principle, one and the same predicate in a given language (e.g. 'break') could appear in all six transitivity values (a) through (f), ranging from an agentive intransitive verb to a patientive intransitive one.[4] Such a system could make use of valence-reducing operations perfectly orthogonal to topicalization. One could arrive at every value with the three parameters of the type [±inverse], [±bivalent] and [±bipersonal], as in Table VIII-4 below. The parameter [±inverse] would cover whether it is the A or the O that is topical, whereas [±bivalent] would amount to the traditional binary view of valence that makes a distinction between monovalent and bivalent predicates. The third parameter would specify whether a second actant is present in logical structure, distinguishing e.g. *the vase was broken*, where an actor is implied in logical structure, from *the vase broke*, where no actor is implied. A redundancy rule would specify that no clause can be both [+bivalent] and [-bipersonal]:

[4] To be sure, more than just these six values can be defined if one allows for additional dimensions like specificity of the arguments and, of course, aspect and aktionsart. Cf. Haspelmath (1990).

Table VIII-4
TRANSITIVITY CLINE I

	[inverse]	[bivalent]	[bipersonal]
A —	-	-	-
A (O)	-	-	+
A O	-	+	+
A **O**	+	+	+
(A) **O**	+	-	+
— O	+	-	-

Needless to say, there is no reason why all possible instantiations should be consistently grammaticized and, as shown by the case studies in the preceding chapters, conflation in one way or another is apparently not an infrequent solution but the widespread pattern.

It should be observed that the transitivity cline as depicted in Table VIII-4 above has some problems.[5] Although the redundancy rule is logically sound, it is something a neat account ought to be able to do without. More importantly, the inclusion of the feature [±inverse] renders the whole system circular unless it is defined in strictly independent terms—e.g. syntactically rather than pragmatically. As a matter of fact, an equivalent table without these shortcomings may be drawn within the Relational Grammar framework:[6]

Table VIII-5
TRANSITIVITY CLINE II

	2→1 ascension	final transitivity	initial transitivity
A —	-	-	-
A (O)	-	-	+
A O	-	+	+
A **O**	+	+	+
(A) **O**	+	-	+
— O	+	-	-

The parameter '2→1 ascension' takes the value [+] if the initial secondary argu-

[5] I am indebted to Michele Loporcaro for a very stimulating discussion of these issues.
[6] Readers unfamiliar with Relational Grammar are referred to Perlmutter (1983) and Perlmutter & Rosen (1984) for both theoretical and empirical studies, and to Blake (1990) for a comprehensive overview.

ment ("2" in RG) is promoted to primary argument ("1" in RG) and [-] otherwise. The other two parameters are the valence of the clause in the final and the initial stratum of representation. Both passives and antipassives reduce the number of core arguments (hence the values [-,+]), but active, unergative, and anticausative constructions do not (hence the values [+,+] and [-,-]).

Such voice continua no doubt represent a welcome contribution to a conceptualization of voice that is typologically more sound than the by-products of rigid structural categorizations. However, both Croft's conceptual or syntactic space and the analogous transitivity cline show two limitations for our present purposes. First, they are concerned with the overall voice picture rather than with inverse constructions in particular. This means that they are not designed to tell us more about different types of inverse constructions (or, more generally, direction-marking patterns) but about possible structural and functional differences between inverses and other constructions. In this sense, they provide little more than an elegant way to tell inverses from passives—an issue the present study has argued to be uninteresting and unsatisfactorily terminological. Second, unless the transitivity cline is defined in terms like those borrowed from RG, they do not take grammatical relations into account. Whereas Croft's RCG framework explicitly proposes to omit this notion altogether, most other functionalist and formalist theories of grammar feature GRs of some kind, either language-specific or universal, construction-oriented or configurationally defined. Therefore, and elaborating some points already outlined in Chapter II, §1.4 below proposes an account of direction and hierarchical alignment that is more compatible with several current approaches that do postulate GRs. This is done not because I believe this notion to be necessary but because I did not want to depart from mainstream models too radically until RCG's claim is more widely accepted.

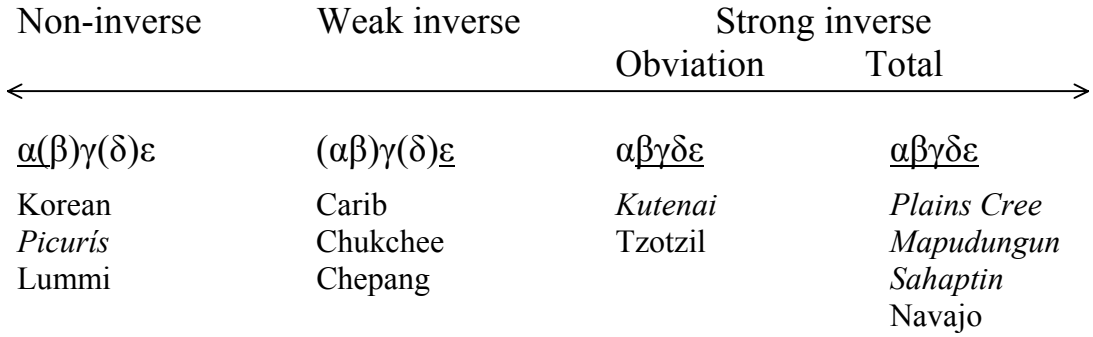
The inverse continuum: Fadden (2000)

Recent work by Fadden differs from most studies of voice in that it explicitly addresses the question of different types of inverse. Unlike Givón, however, she orders the different inverse systems along an "inverse continuum".

Inversion is seen as weak or strong, and the former further distinguishes total and obviation inversion. The cline is built upon five parameters: (α) existence of "hierarchy inverse", i.e. semantic direction, (β) existence of "discourse inverse", i.e. pragmatic direction, (γ) existence of a contrastive passive, (δ) head marking, and (ε) transitivity, i.e. whether inverse constructions are transitive or not. Her continuum and categorization of several languages is given in Figure VIII-3 below (those treated in this study are in italics). The parameters with positive value for all languages in each category are underlined, and those with positive values for some languages appear in parentheses.

In Fadden's view, non-inverse systems such as those on the far left show semantic direction (α) but fail to meet the other requirements. True inverses begin when the inverse construction is transitive (ε), but weak inverse languages differ as to the values for all other parameters. Strong inversion is characterized by a positive value for parameters β through ε (crucially γ, the passive construction), and semantic direction distinguishes total from obviation inverses.

Figure VIII-3
FADDEN'S (2000) INVERSE CONTINUUM



First observe the heterogeneity of Fadden's parameters. Whether inverse constructions are detransitive bears relation to syntactic alignment, as we have seen, and so does, albeit somewhat differently, the existence or absence of a contrastive passive construction. Instead of placing the locus parameter as a feature that can correlate with direction like Nichols and Klaiman, Fadden thinks of head marking as a factor characterizing not the type but the system, i.e. the feature. Finally, the semantic / pragmatic nature of the direction opposition is a parameter as well. Of course, heterogeneous parameters do not necessarily pose a problem, but the ones chosen by Fadden appear to be unprincipled or at least unexplained.

Related to what has just been noted is the fact that Fadden's framework amounts to an IMPLICIT theory of the form-content issue mentioned in Chapter I (Nichols' "Saussurean dogma"). The indexability hierarchy appears to operate on a semantic / referential basis at the very bottom, then optionally incorporating the discourse dimension, and optionally retaining the semantic element, until both realms are present. On the way to the top, valence and grammatical relations have made their entrance, followed by locus of marking. An EXPLICIT reply to Nichols' objections would have improved the theory.

Finally consider Fadden's aim:

> I provide a detailed analysis of three types of inverse systems [i.e., weak, obviation, and total, FZ]. In so doing, I propose tighter constraints for differentiating direct-inverse form active-passive alternations thereby providing cross-linguistically valid criteria that can be used by researchers in the analysis of unclear cases.
>
> (Fadden 2000: iv)

Thus, Fadden's model is like the other frameworks discussed in this study in that it focuses on the question "Is construction X a passive or an inverse?" To be sure, she asks herself what kinds of inverses there are. Supposing construction X was a relevant candidate in the first place, the answer is a yes or a no: it is either a passive that resembles an inverse because it somehow reacts to an indexability hierarchy, or it is a real inverse since passives are intransitive.

1.4 The morphosyntax of direction

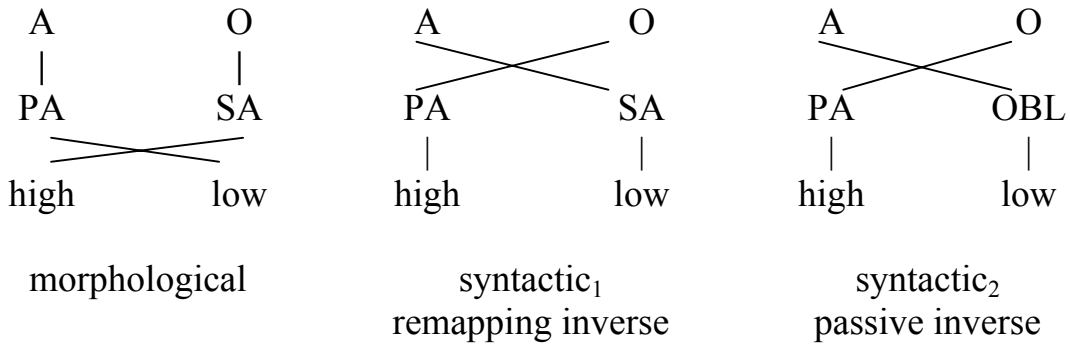
In Chapter II, direction was characterized as a morphosyntactic opposition between clauses where the role and the indexability hierarchies are aligned and those where they are not. This was graphically represented in Figure I-2, reproduced here as Figure VIII-4:

Figure VIII-4
DIRECTION IN A TWO-TIERED
MORPHOSYNTACTIC REPRESENTATION

Once the dimension of syntactic functions enters the picture, there are two possibilities for the role and the indexability hierarchies not to be aligned. In the first case (the morphological inverse exemplified by Sahaptian in my sample), the role hierarchy governs the access to syntactic functions and therefore the primary argument is the A and the other argument, typically the secondary argument, is the O. In the second case (syntactic inverse), it is the indexability hierarchy that governs access to syntactic functions, and therefore the highest

argument is the primary argument although it is an undergoer and the lowest argument, the actor, is the other core argument (as in Kiowa, perhaps also exemplified by Mapudungun, Kutenai, and Algonquian) or even an oblique (as in Tanoan). These three types of inverse are graphically depicted in Figure VIII-5:

Figure VIII-5
SOME INVERSES IN A THREE-TIERED
MORPHOSYNTACTIC REPRESENTATION



It goes without saying that such a representation is highly simplified and needs some refinement in order to accommodate the complexity found in natural languages. In particular, it is important to bear in mind that mappings like those represented in Figure VIII-5 may correspond to one clause type among a series, depending on predicate class and/or on clause linkage pattern, as we saw in Chapter III for Algonquian.

Nevertheless, even such a gross schema is as if we looked through a magnifying glass at the region that was underspecified in the transitivity cline sketched in §1.3. From left to right, the direction opposition can be said to be gradually more syntacticized in that the indexability hierarchy is increasingly responsible for the accessibility to syntactic functions. The [low] actor may be the primary argument in a morphological inverse, but the syntactic inverses require a [high] actant in that function. In the remapping type, the [low] argument has access to the secondary argument function, and in the passive type it cannot even appear as core argument.

A final note on modeling

Let me close this section by briefly mentioning some features of a number of syntactic theories that are either compatible with the views explicitly or implicitly advanced here or rather in need of adjustment or revision.

Within Lexical-Functional Grammar, Lexical Mapping Theory works with purportedly universal GRs ("grammatical functions") characterized as closely related to semantic roles, and the principles that govern the mapping between these two domains are not as developed as to accommodate the remapping inverse—in fact, Bresnan (2001: 171f) does not address Rhodes's syntactic arguments in favor of a remapping inverse in Central Ojibwa but favors Dahlstrom's account of Plains Cree in terms of a simple accusative pattern.

Role and Reference Grammar postulates the existence of language-specific GRs, but they are essentially reducible to the notions of "pivot" and "controller", and most of what is interesting here for our present purposes occurs in the linking between the structure of the sentence ("constituent projection") and its semantics (A and O macroroles and the "logical structure" with "argument positions"). As detailed in Van Valin & LaPolla (1997: 294f), voice alternations are articulated upon the notions of "privileged syntactic argument modulation voice" ("allowing a non-default argument to function as syntactic pivot or controller") and "argument modulation" (involving "the non-canonical status of a macrorole argument"), which are fairly close to the processes of promotion (i.e. from secondary argumenthood to primary argumenthood) and demotion (i.e. from secondary argumenthood to oblique) as they have been understood in this study.

Rather unappealingly from a present-day functionalist point of view, Relational Grammar works with undefined, primitive GRs and multiple strata. Also some of the laws or well-formedness conditions formulated in this framework can be problematic beyond purely terminological issues (e.g. the Chômeur Advancement Ban stipulating that chômeurs, i.e. core arguments demoted to oblique arguments, cannot be advanced, and the Final 1 Law requiring that there be a surface 1, i.e. subject—which, however, does not need to be overt). Nevertheless, the RG mechanics are attractive if both the exact relation between the individual strata is either language-specific or vague and the GRs ("1", "2", "3", and "obliques") are not universal subjects, objects, and the like but are allowed to be (possibly even diffuse) language-specific categories.

Some optimality-theoretic approaches to describing and explaining direction patterns are, insofar as they do not posit universal GRs, attractive and largely compatible with the ideas exposed in this study (see Appendix 3 for examples and some discussion). Especially appealing is the fact that Optimality Theory takes what can be seen as a progressive syntacticization of the indexability hierarchy (moving from left to right in Figure VIII-5) into account in a natural and well-motivated way.

2. Lessons and prospects

Chapters I and II formulated a theory of alignment and a theory of direction that allowed me to do a number of things with the selected twelve languages in Chapters III through VII. First, the morphology marking person and number was approached in a more organic manner taking into account the relatedness of elements encoding things like '3O', 'direct', '3p→3s'. Second, regarding direction as a category in its own right made it possible to relocate the problem of inverse versus passive to the area where it belongs, viz. the largely unsolved issue of the rationales behind alignment and grammatical relations. As a by-product of this move, dependent-marking and especially double-marking patterns entered the picture in a natural way. Instead of expanding our knowledge about what may be called inverse language type, I have tried to deepen our understanding of direction in such a way that the discussion sheds some light on what is called hierarchical alignment type.

In effect, the study of direction during the last two decades is a path leading to the same vantage point as the study of ergativity and Austronesian languages. One of the main lessons learned has been the need to revise and refine many received notions, especially those that bear relation to syntactic functions. The attempts to take structures that deviate from the textbook account of (mostly well-known western) Indo-European languages led to a debate on surface versus deep ergativity, which in turn informed the notion of mixed-pivot language we encounter e.g. in the comparatively recent work by Manning and others mentioned in Chapter II. The distinction between morphological and syntactic ergative languages has given way to a more principled multi-layered view of syntax acknowledging different degrees of syntactic ergativity.

Similarly, the present study has included tentative explorations in territory suggested basically, albeit not exclusively, by Rhodes's (1976) proposal for Central Ojibwa. A relatively modest amount of discussion in the linguistic literature has reached the first stage, which can be construed as a direct parallel to the ergativity question: It might be the case that some languages show purely morphological inversion (Sahaptian being a case in point) while others show syntactic inversion as well (with Algonquian possibly belonging to this type).

This study has hesitantly but clearly ventured into the second stage, viz. the recognition of different kinds, perhaps also different degrees, of hierarchical alignment. Algonquian languages appear to be formidable examples of mixed-pivot languages, but they go beyond S, A, and O. In addition to some Algonquian structures like the ergative verb stems (a good candidate for Mithun & Chafe's notion of immediacy of involvement) and the somewhat imperfect accusative obviative marking (arguably a reflex of the starting-point notion), the question of undergoer subjects and actor objects requires an explanation on a

different level. Once an indexability hierarchy is allowed to play a role in the syntax, it is not as though grammatical relations became inexistent or irrelevant. Rather, the language seems to be more concerned with the way constructions pattern, and why. *Because* grammatical relations are of paramount importance, a single dominant pivot seems to be ruled out as a desirable option.

Summing up, I have claimed here that languages differ as to how they treat states of affairs where the undergoer outranks the actor on an indexability hierarchy. Some tend to disprefer such constellations statistically while others mark them morphologically. Still others reserve the primary argument function for high-ranking arguments, and some languages even obligatorily ban the low-ranking argument from the clause core. Further research shall show whether there are more construction types than these.

Further research shall also prove or disprove the general usefulness of the framework advanced here. Historical studies shall provide substantiation or refutation of the speculative hypotheses concerning development paths of individual marking strategies, constructions, and/or whole systems. Similar comparative studies in Munda, Dravidian, Tibeto-Burman, Chukotko-Kamchatkan, Australian and other indigenous languages of the Americas shall complement work that unveils reflexes to indexability hierarchies in Indo-European, Afroasiatic, or other languages not customarily investigated in this respect. Ethnolinguistic work along the lines of Witherspoon's (1977, 1980) famous account of the Navajo indexability hierarchy ought to be undertaken in order for anthropologists, linguists, sociologists, and interested readers in general to learn more about these peculiar rankings that pervade the linguistic structures of language after language in some parts of the world.

Needless to say, the matter of real urgency is research that rescues any language still spoken at the beginning of the 21st century from extinction in the sense that, even if its current speakers opt for a different tongue, at least their descendants and/or the rest of the world will have a vague idea of what kind of language that was. It is in this light that the desirability of the studies mentioned above is to be judged. Some scholars may be not or no longer capable of writing a descriptive grammar or a dictionary and of compiling texts whose importance goes way beyond the interest of a relatively small community in the universities of rich countries. Nevertheless, they can contribute to our understanding of human language, and thereby of the human condition, by providing better answers, and possibly also better questions, than I have done in these pages.

Appendix 1
Algonquian paradigms

1. Plains Cree (adapted from Dahlstrom 1986:68ff, Wolfart 1996:412f)

1.1 Animate intransitive: *pimipahtā-* 'run'

	Independent	Conjunct
1s	ni- pimipahtā-n_5	ē-pimipahtā-$yān_5$
1p	ni- pimipahtā-$nān_5$	ē-pimipahtā-$yāhk_5$
2s	ki- pimipahtā-n_5	ē-pimipahtā-yan_5
12	ki- pimipahtā-$nānaw_5$	ē-pimipahtā-$yahkw_5$
2p	ki- pimipahtā-$nāwāw_5$	ē-pimipahtā-$yēkw_5$
3sprox	Ø- pimipahtā-w_5	ē-pimipahtā-t_5
3pprox	Ø- pimipahtā-w_5-ak_7	ē-pimipahtā-t_5-ik_7
3obv	Ø- pimipahtā-yi_3-w_5-a_7	ē-pimipahtā-yi_3-t_5

1.2 Inanimate Intransitive: *mihkwā-* 'be red'

	Independent	Conjunct
sprox	Ø- mihkwā-w_5	ē-mihkwā-k_5
pprox	Ø- mihkwā-w_5-a_7	ē-mihkwā-k_5-i_7
sobv	Ø- mihkwā-yi_3-w_5	ē-mihkwā-yi_3-k_5
pobv	Ø- mihkwā-yi_3-w_5-a_7	ē-mihkwā-yi_3-k_5-i_7

1.3 Transitive Inanimate: *wāpaht-* 'see' (Class I stem)

	Independent	Conjunct
1s	ni- wāpaht-$ē_2$-n_5	ē-wāpaht-am_2-$ān_5$
1p	ni- wāpaht-$ē_2$-$nān_5$	ē-wāpaht-am_2-$āhk_5$
2s	ki- wāpaht-$ē_2$-n_5	ē-wāpaht-am_2-an_5
12	ki- wāpaht-$ē_2$-$nānaw_5$	ē-wāpaht-am_2-$ahkw_5$
2p	ki- wāpaht-$ē_2$-$nāwāw_5$	ē-wāpaht-am_2-$ēk_5$
3sprox	Ø- wāpaht-am_2-w_5	ē-wāpaht-am_2-k_5
3pprox	Ø- wāpaht-am_2-w_5-ak_7	ē-wāpaht-am_2-k_5-ik_7
3obv	Ø- wāpaht-am_2-iyi_3-w_5-a_7	ē-wāpaht-am_2-iyi_3-t_5

1.4 Transitive Animate: *sēkih-* ‘frighten’

	Independent	Conjunct
• Mixed I		
1s→3sprox	ni- sēkih-ā$_2$-w$_5$	ē-sēkih-Ø$_2$-ak$_5$
1s→3pprox	ni- sēkih-ā$_2$-w$_5$-ak$_7$	ē-sēkih-Ø$_2$-ak$_5$-ik$_7$
1s→3obv	ni- sēkih-im$_1$-ā$_2$-w$_5$-a$_7$	ē-sēkih-im$_1$-Ø$_2$-ak$_5$
1p→3sprox	ni- sēkih-ā$_2$-nān$_5$	ē-sēkih-ā$_2$-yāhk$_5$
1p→3pprox	ni- sēkih-ā$_2$-nān$_5$-ak$_7$	ē-sēkih-ā$_2$-yāhk$_5$-ik$_7$
1p→3obv	ni- sēkih-im$_1$-ā$_2$-nān$_5$-a$_7$	ē-sēkih-im$_1$-ā$_2$-yāhk$_5$
2s→3sprox	ki- sēkih-ā$_2$-w$_5$	ē-sēkih-Ø$_2$-at$_5$
2s→3pprox	ki- sēkih-ā$_2$-w$_5$-ak$_7$	ē-sēkih-Ø$_2$-at$_5$-ik$_7$
2s→3obv	ki- sēkih-im$_1$-ā$_2$-w$_5$-a$_7$	ē-sēkih-im$_1$-Ø$_2$-at$_5$
12→3sprox	ki- sēkih-ā$_2$-naw$_5$	ē-sēkih-ā$_2$-yahkw$_5$
12→3pprox	ki- sēkih-ā$_2$-naw$_5$-ak$_7$	ē-sēkih-ā$_2$-yahkw$_5$-ik$_7$
12→3obv	ki- sēkih-im$_1$-ā$_2$-naw$_5$-a$_7$	ē-sēkih-im$_1$-ā$_2$-yahkw$_5$
2p→3sprox	ki- sēkih-ā$_2$-wāw$_5$	ē-sēkih-ā$_2$-yēkw$_5$
2p→3pprox	ki- sēkih-ā$_2$-wāw$_5$-ak$_7$	ē-sēkih-ā$_2$-yēkw$_5$-ik$_7$
2p→3obv	ki- sēkih-im$_1$-ā$_2$-wāw$_5$-a$_7$	ē-sēkih-im$_1$-ā$_2$-yēkw$_5$
• Mixed II		
3sprox→1s	ni- sēkih-ikw$_2$-w$_5$	ē-sēkih-Ø$_2$-it$_5$
3pprox→1s	ni- sēkih-ikw$_2$-w$_5$-ak$_7$	ē-sēkih-Ø$_2$-it$_5$-ik$_7$
3obv→1s	ni- sēkih-iko$_2$-yi$_3$-w$_5$-a$_7$	ē-sēkih-Ø$_2$-iyi$_3$-it$_5$
3sprox→1p	ni- sēkih-iko$_2$-nān$_5$	ē-sēkih-iko$_2$-yāhk$_5$
3pprox→1p	ni- sēkih-iko$_2$-nān$_5$-ak$_7$	ē-sēkih-iko$_2$-yāhk$_5$-ik$_7$
3obv→1p	ni- sēkih-iko$_2$-nān$_5$-a$_7$	ē-sēkih-iko$_2$-wā$_3$-yāhk$_5$
3sprox→2s	ki- sēkih-ikw$_2$-w$_5$	ē-sēkih-Ø$_2$-isk$_5$
3pprox→2s	ki- sēkih-ikw$_2$-w$_5$-ak$_7$	ē-sēkih-Ø$_2$-isk$_5$-ik$_7$
3obv→2s	ki- sēkih-iko$_2$-yi$_3$-w$_5$-a$_7$	ē-sēkih-Ø$_2$-iyi$_3$-isk$_5$
3sprox→12	ki- sēkih-iko$_2$-naw$_5$	ē-sēkih-iko$_2$-yahkw$_5$
3pprox→12	ki- sēkih-iko$_2$-naw$_5$-ak$_7$	ē-sēkih-iko$_2$-yahkw$_5$-ok$_7$
3obv→12	ki- sēkih-iko$_2$-naw$_5$-a$_7$	ē-sēkih-iko$_2$-wā$_3$-yahkw$_5$
3sprox→2p	ki- sēkih-iko$_2$-wāw$_5$	ē-sēkih-iko$_2$-yēkw$_5$
3pprox→2p	ki- sēkih-iko$_2$-wāw$_5$-ak$_7$	ē-sēkih-iko$_2$-yēkw$_5$-ik$_7$
3obv→2p	ki- sēkih-iko$_2$-wāw$_5$-a$_7$	ē-sēkih-iko$_2$-wā$_3$-yēkw$_5$
• Mixed III		
inan→1s	ni- sēkih-iko$_2$-n$_5$	ē-sēkih-iko$_2$-yān$_5$
inan→1p	ni- sēkih-iko$_2$-nān$_5$	ē-sēkih-iko$_2$-yāhk$_5$
inan→2s	ki- sēkih-iko$_2$-n$_5$	ē-sēkih-iko$_2$-yan$_5$
inan→12	ki- sēkih-iko$_2$-nānaw$_5$	ē-sēkih-iko$_2$-yahkw$_5$
inan→2p	ki- sēkih-iko$_2$-nāwāw$_5$	ē-sēkih-iko$_2$-yēkw$_5$

	Independent	Conjunct
• Non-local		
3sprox→3obv	Ø- sēkih-ē$_2$-w$_5$	ē-sēkih-ā$_2$-t$_5$
3pprox→3obv	Ø- sēkih-ē$_2$-w$_5$-ak$_7$	ē-sēkih-ā$_2$-t$_5$-ik$_7$
3obv→3obv	Ø- sēkih-ē$_2$-yi$_3$-w$_5$-a$_7$	ē-sēkih-ā$_2$-yi$_3$-t$_5$
3sprox→3f.obv	Ø- sēkih-im$_1$-ē$_2$-w$_5$	ē-sēkih-im$_1$-ā$_2$-t$_5$
3pprox→3f.obv	Ø- sēkih-im$_1$-ē$_2$-w$_5$-ak$_7$	ē-sēkih-im$_1$-ā$_2$-t$_5$-ik$_7$
3obv→3sprox	Ø- sēkih-ikw$_2$-w$_5$	ē-sēkih-iko$_2$-t$_5$
3obv→3pprox	Ø- sēkih-ikw$_2$-w$_5$-ak$_7$	ē-sēkih-iko$_2$-t$_5$-ik$_7$
3obv→3obv	Ø- sēkih-iko$_2$-yi$_3$-w$_5$-a$_7$	ē-sēkih-iko$_2$-yi$_3$-t$_5$
inan→3sprox	Ø- sēkih-ikw$_2$-w$_5$	ē-sēkih-iko$_2$-t$_5$
inan→3pprox	Ø- sēkih-ikw$_2$-w$_5$-ak$_7$	ē-sēkih-iko$_2$-t$_5$-ik$_7$
• Local		
1s→2s	ki- sēkih-iti$_2$-n$_5$	ē-sēkih-it$_2$-ān$_5$
1s→2p	ki- sēkih-iti$_2$-nāwāw$_5$	ē-sēkih-it$_2$-akok$_5$
1p→2	ki- sēkih-iti$_2$-nān$_5$	ē-sēkih-it$_2$-āhk$_5$
2s→1s	ki- sēkih-i$_2$-n$_5$	ē-sēkih-i$_2$-yan$_5$
2p→1s	ki- sēkih-i$_2$-nāwāw$_5$	ē-sēkih-i$_2$-yēkw$_5$
2→1p	ki- sēkih-i$_2$-nān$_5$	ē-sēkih-i$_2$-yāhk$_5$

1.5 Indefinite Actor (TA: *sēkih-* ‘frighten’)

	Independent	Conjunct
1s	ni- sēkih-ikawi-n$_5$	ē-sēkih-ikawi-yān$_5$
1p	ni- sēkih-ikawi-nān$_5$	ē-sēkih-ikawi-yāhk$_5$
2s	ki- sēkih-**ikawi**-n$_5$	ē-sēkih-ikawi-yan$_5$
12	ki- sēkih-ikawi-nānaw$_5$	ē-sēkih-ikawi-yahkw$_5$
2p	ki- sēkih-ikawi-nāwāw$_5$	ē-sēkih-ikawi-yēkw$_5$
3sprox	Ø- sēkih-ā$_2$-w$_5$	ē-sēkih-iht
3pprox	Ø- sēkih-ā$_2$-w$_5$-ak$_7$	ē-sēkih-iht-ik$_7$
3obv	Ø- sēkih-im$_1$-ā$_2$-w$_5$-a$_7$	ē-sēkih-im$_1$-iht

1.6 Indefinite Subject (AI/TI: *pimipahtā-* ‘run’)

Independent	Conjunct
Ø- pimipahtā-(nā)niwiw	ē-pimipahtā-hk

1.7 Relational paradigm

	Independent	Conjunct
indef.	Ø- ..-ā$_2$-n$_5$	ē-..-iht
1	ni- ..-ā$_2$-n$_5$	ē-..-ak$_5$
2	ki- ..-ā$_2$-n$_5$	ē-..-at$_5$
3	Ø- ..-ē$_2$-w$_5$	ē-..-ā$_2$-t$_5$

Sample (morpho)phonemic rules (cf. Wolfart 1996: 423 for more details)

(a) *w-w* → *w* e.g. *ni-sēkih-ik**w**$_2$-**w**$_5$-ak$_7$* → *nisēkihik**w**ak*
(b) C*w*# → C# e.g. *ē-pimipahtā-yēk**w**$_5$* → *ēpimipahtāyēk*
(c) *Cw-iC* → CoC e.g. *ē-sēkih-ā$_2$-yah**k**w$_5$-**ik**$_7$* → *ēsēkihāyah**kok***
(d) *{m,n}-{k,t}* → *h{k,t}* e.g. *ē-wāpaht-a**m**$_2$-**k**$_5$* → *ēwāpahta**hk***
(e) *t-{i,ī}* → *c{i,ī}* e.g. *ē-pimipahtā-**t**$_5$-**i**k$_7$* → *ēpimipahtā**ci**k*
(f) *i-i* → *i* e.g. *ē-sēkih-Ø$_2$-iy**i**$_3$-**i**sk$_5$* → *ēsēkihiy**i**sk*

2. Miami-Illinois (adapted from Costa 1994)

2.1 Animate Intransitive: *nēhsē-* 'breathe'

	Independent	Conjunct
1s	ni- nēhsē	nēhsē-ān$_6$-i$_8$
1p	ni- nēhsē-mena$_6$	nēhsē-ānk$_6$-i$_8$
2s	ki- nēhsē	nēhsē-yan$_6$-i$_8$
12	ki- nēhsē-mena$_6$	nēhsē-yankw$_6$-i$_8$
2p	ki- nēhsē-mwa$_6$	nēhsē-ēkw$_6$-i$_8$
3sprox	Ø- nēhsē-w$_6$-a$_8$	nēhsē-t$_6$-i$_8$
3pprox	Ø- nēhsē-w$_6$-aki$_8$	nēhsē-wā$_3$-t$_6$-i$_8$
3sobv	Ø- nēhsē-w$_6$-ali$_8$	nēhsē-li$_5$-t$_6$-i$_8$
3pobv	Ø- nēhsē-w$_6$-ahi$_8$	nēhsē-t$_6$-ihi$_8$ / nēhsē-li$_5$-t$_6$-i$_8$

2.2 Inanimate Intransitive: *wintē-* 'boil'

	Independent	Conjunct
3s	Ø- wintē-w$_6$-i$_8$	wintē-k$_6$-i$_8$
3p	Ø- wintē-w$_6$-i$_8$	wintē-k$_6$-ia$_8$

2.3 Transitive Inanimate: *wāpant-* ‘look at’ (Class I stem)

	Independent	Conjunct
1s	ni- wāpant-a_1	wāpant-am_1-$ān_6$-i_8
1p	ni- wāpant-$ā_1$-$mena_6$	wāpant-$Ø_1$-$ānk_6$-i_8
2s	ki- wāpant-a_1	wāpant-am_1-an_6-i_8
12	ki- wāpant-$ā_1$-$mena_6$	wāpant-$Ø_1$-$ankw_6$-i_8
2p	ki- wāpant-$ā_1$-mwa_6	wāpant-am_1-$ēkw_6$-i_8
3sprox	Ø- wāpant-am_1-w_6-a_8	wāpant-am_1-k_6-i_8
3pprox	Ø- wāpant-am_1-w_6-aki_8	wāpant-am_1-$ōwā_3$-k_6-i_8
3sobv	Ø- wāpant-am_1-w_6-ali_8	wāpant-am_1-li_5-t_6-i_8
3pobv	Ø- wāpant-am_1-w_6-ahi_8	n.a.

2.4 Transitive Animate: *wāpam-* ‘look at’

	Independent	Conjunct
• Mixed I		
1s→3s	ni- wāpam-$ā_1$	wāpam-$Ø_1$-ak_6-i_8
1s→3p	ni- wāpam-$ā_1$-ki_8	wāpam-$Ø_1$-ak_6-iki_8
1p→3s	ni- wāpam-$ā_1$-$mena_6$	wāpam-$Ø_1$-$akint_6$-i_8
1p→3p	ni- wāpam-$ā_1$-$mena_6$-aki_8	wāpam-$Ø_1$-$akint_6$-iki_8
2s→3s	ki- wāpam-$ā_1$	wāpam-$Ø_1$-at_6-i_8
2s→3p	ki- wāpam-$ā_1$-aki_8°	wāpam-$Ø_1$-at_6-iki_8
12→3s	ki- wāpam-$ā_1$-$mena_6$	wāpam-$Ø_1$-$ankw_6$-i_8
12→3p	ni- wāpam-$ā_1$-$mena_6$-aki_8	wāpam-$Ø_1$-$ankw_6$-iki_8
2p→3s	ki- wāpam-$ā_1$-mwa_6	wāpam-$Ø_1$-$ēkw_6$-i_8
2p→3p	ki- wāpam-$ā_1$-mwa_6-aki_8°	wāpam-$Ø_1$-$ēkw_6$-iki_8
• Mixed II		
3s→1s	ni- wāpam-ekw_1-w_6-a_8	wāpam-i_1-t_6-i_8
3p→1s	ni- wāpam-eko_1-w_6-aki_8	wāpam-i_1-t_6-iki_8
3s→1p	ni- wāpam-eko_1-$nān_6$	wāpam-i_1-$amint_6$-i_8
3p→1p	ni- wāpam-eko_1-$nān_6$-aki_8	wāpam-i_1-$amint_6$-iki_8
3s→2s	ki- wāpam-ekw_1-w_6-a_8	wāpam-el_1-k_6-i_8
3p→2s	ki- wāpam-eko_1-w_6-aki_8	wāpam-el_1-k_6-iki_8
3s→12	ki- wāpam-eko_1-$nān_6$	wāpam-el_1-$ankw_6$-i_8
3p→12	ki- wāpam-eko_1-$nān_6$-aki_8	wāpam-el_1-$ankw_6$-iki_8
3s→2p	ki- wāpam-eko_1-wa_6	wāpam-el_1-$ākw_6$-i_8
3p→2p	ki- wāpam-eko_1-wa_6-aki_8	wāpam-el_1-$ākw_6$-iki_8

• Non-local		
3s→3sobv	Ø- wāpam-$ē_1$-w_6-a_8	wāpam-$ā_1$-t_6-i_8
3p→3sobv	Ø- wāpam-$ē_1$-w_6-aki$_8$	wāpam-$ā_1$-$wā_3$-t_6-i_8 / wāpam-$ā_1$-t_6-iki$_8$
3p→3pobv	n.a.	wāpam-$ā_1$-$wā_3$-t_6-iki$_8$
3obv→3obv	n.a.	wāpam-$ā_1$-li_5-t_6-i_8
3sobv→3s	Ø- wāpam-ekw$_1$-w_6-a_8	wāpam-eko$_1$-t_6-i_8
3sobv→3p	Ø- wāpam-ekw$_1$-w_6-aki$_8$	wāpam-eko$_1$-$wā_3$-t_6-i_8
• Local		
1s→2s	ki- wāpam-ele$_1$	wāpam-el$_1$-ān$_6$-i_8
1s→2p	ki- wāpam-ele$_1$-mwa$_6$	wāpam-el$_1$-akok$_6$-i_8
1p→2	ki- wāpam-ele$_1$-mena$_6$	wāpam-el$_1$-ānk$_6$-i_8
2s→1s	ki- wāpam-i$_1$	wāpam-i$_1$-yan$_6$-i_8
2p→1s	ki- wāpam-i$_1$-mwa$_6$	wāpam-i$_1$-yēkw$_6$-i_8
2→1p	ki- wāpam-i$_1$-mena$_6$	wāpam-i$_1$-ānk$_6$-i_8

2.5 Indefinite Actor / Passive: TA *wāpam-* ‘look at’

	Independent	Conjunct
1s	ni- wāpam-ekō$_1$	wāpam-i$_1$-n$_3$-k$_6$-i_8
1p	ni- wāpam-ekō$_1$-mena$_6$	wāpam-i$_1$-amink$_6$-i_8
2s	ki- wāpam-ekō$_1$	wāpam-el$_1$-en$_3$-k$_6$-i_8
12	ki- wāpam-ekō$_1$-mena$_6$	wāpam-el$_1$-en$_3$-ankw$_6$-i_8
2p	ki- wāpam-ekō$_1$-mwa$_6$	wāpam-el$_1$-en$_3$-ākw$_6$-i_8
3s	Ø- wāpam-ā$_1$-w_6-a_8	wāpam-Ø$_1$-en$_3$-t_6-i_8
3p	Ø- wāpam-ā$_1$-w_6-aki$_8$	wāpam-Ø$_1$-en$_3$-t_6-iki$_8$

Sample (morpho)phonemic rules (Costa 1994: 36f, 81f):

(a) PA **e* and **i* merge into *i* in unstressed syllables only (and stress is placed on even syllables from left to right; long vowels are always stressed and force the count to restart from there): *ni-wāpam-ā-m**i**na* ‘we$_e$ look at him’ but *ki-wāpam-eli-m**e**na* ‘we$_i$ look at you’.

(b) PA **ā* before the -w_6 suffix regularly turns to **ē* also in Miami-Illinois, e.g. *nep**ā**-* ‘sleep’ but *nip**ē**-w_6-a_8* ‘he sleeps’.

(c) AI stems ending in *e* like *nep**e**-* ‘die’ drop it before -w_6: *nip-w_6-a_8* ‘he dies’.

(d) *-Cwa + -aki/ali/ahi → -Cōki/Cōli/Cōhi*, e.g. *wāpant-am$_1$-w_6-a_8* ‘he looks at it’ but *wāpant-am$_1$-**ōli*** ‘he(obv.) looks at it’.

(e) *w + w → w*, e.g. *wāpam-ek**w**$_1$-**w**$_6$-a_8 > wāpamek**w**a* ‘he looks at him’.

(f) The conjunct 3rd person -t_6 is palatalized before the conjunct ending -i_8, e.g. *īhpesi-**t**$_6$-i_8 → īhpisi**č**i*.

3. Central Ojibwa (adapted from Rhodes 1976)

3.1 Animate intransitive: e.g. *wīnizi-* 'be dirty'[1]

	Independent	Conjunct
1s	n- wīnizi	wīnizi -$ān_5$
1p	n- wīnizi -min_5	wīnizi -$āng_5$
2s	g- wīnizi	wīnizi -an_5
2p	g- wīnizi -mw_5	wīnizi -$ēgw_5$
12	g- wīnizi -min_5	wīnizi -$angw_5$
3sprox	Ø- wīnizi -w_7	wīnizi -d_7
3pprox	Ø- wīnizi -w_7-ag_x	wīnizi -$wā_6$-d_7
3obv	Ø- wīnizi -w_7-an_x	wīnizi -ini_6-d_7

3.2 Inanimate Intransitive: e.g. *wīnad-* 'be dirty'

	Independent	Conjunct
sprox	Ø- wīnad -w_7	wīnad -g_7
pprox	Ø- wīnad -w_7-an_9	wīnad -g_7
obv	Ø- wīnad -ini_6-w_7	wīnad -ini_6-g_7

3.3 Transitive Inanimate:[2] e.g. *bīd-* 'bring'[3] (Class I stem)

	Independent	Conjunct
1s	n- bīd -$ō_1$-n_4	bīd -$ō_1$-n_4-$ān_5$
1p	n- bīd -$ō_1$-n_4-$nāni_5$	bīd -$ō_1$-n_4-$āng_5$
2s	g- bīd -$ō_1$-n_4	bīd -$ō_1$-n_4-an_5
2p	g- bīd -$ō_1$-n_4-$wā_5$	bīd -$ō_1$-n_4-$ēgw_5$
12	g- bīd -$ō_1$-n_4-$nāni_5$	bīd -$ō_1$-n_4-$angw_5$
3sprox	w- bīd -$ō_1$-n_4	bīd -$ō_1$-n_4-d_7
3pprox	w- bīd -$ō_1$-n_4-$wā_6$	bīd -$ō_1$-n_4-$wā_6$-d_7
3obv	w- bīd -$ō_1$-n_4-ini_6	bīd -$ō_1$-n_4-ini_6-d_7

[1] The root is *wīn* 'dirty'; *-ad* and *-izi* are the AI and II suffixes respectively.
[2] Independent forms with a plural Undergoer additionally suffix *-an* in position 9.
[3] The root is *bī-* 'bring'; *-d* and *-n* are the TI and TA suffixes respectively.

3.4 Transitive Animate: e.g. *bīn-* 'bring'

	Independent	Conjunct
• Mixed I		
1s→3s	n- bīn -$ā_1$	bīn -$ā_1$-ag_5
1s→3p	n- bīn -$ā_1$-ag_9	bīn -$ā_1$-ag_5-$wā_6$
1p→3s	n- bīn -$ā_1$-$nāni_5$	bīn -$ā_1$-$angid_5$
1p→3p	n- bīn -$ā_1$-$nāni_5$-ag_9	bīn -$ā_1$-$angid_5$-$wā_6$
2s→3s	g- bīn -$ā_1$	bīn -$ā_1$-ad_3
2s→3p	g- bīn -$ā_1$-ag_9	bīn -$ā_1$-ad_3-$wā_6$
2p→3s	g- bīn -$ā_1$-$wā_5$	bīn -$ā_1$-$ēgw_5$
2p→3p	g- bīn -$ā_1$-$wā_5$-ag_9	bīn -$ā_1$-$ēgw_5$-$wā_6$
12→3s	g- bīn -$ā_x$-$nāni_5$	bīn -$ā_1$-$angw_5$
12→3p	g- bīn -$ā_x$-$nāni_5$-ag_9	bīn -$ā_1$-$angw_5$-$wā_6$
• Mixed II		
3sprox→1s	n- bīn -igw_1-i_2	bīn -i_1-d_4
3pprox→1s	n- bīn -igw_1-i_2-ag_9	bīn -i_1-$wā_3$-d_4
3sprox→1p	n- bīn -igw_1-i_2-$nāni_5$	bīn -i_1-$aming_3$-d_4[4]
3pprox→1p	n- bīn -igw_1-i_2-$nāni_5$-ag_9	bīn -i_1-$aming_3$-d_4-$wā_6$
3sprox→2s	g- bīn -igw_1-i_2	bīn -ik_1
3pprox→2s	g- bīn -igw_1-i_2-ag_x	bīn -ik_1-$wā_5$
3sprox→2p	g- bīn -igw_1-i_2-$wā_5$	bīn -$inin_1$-$ēgw_5$
3pprox→2p	g- bīn -igw_1-i_2-$wā_5$-ag_9	bīn -$inin_1$-$ēgw_5$-$wā_6$
3sprox→12	g- bīn -igw_1-i_2-$nāni_5$	bīn -$inin_1$-$angw_5$
3pprox→12	g- bīn -igw_1-i_2-$nāni_5$-ag_9	bīn -$inin_1$-$angw_5$-$wā_6$
• Mixed III[5]		
inan→1s	n- bīn -igw_1-i_2-n_4	bīn- igw_1-i_2-$ān_5$
inan→1p	n- bīn -igw_1-i_2-n_4-$nāni_5$	bīn- igw_1-i_2-$āng_5$
inan→2s	g- bīn -igw_1-i_2-n_4	bīn- igw_1-i_2-an_5
inan→12	g- bīn -igw_1-i_2-n_4-$wā_5$	bīn- igw_1-i_2-$ēgw_5$
inan→2p	g- bīn -igw_1-i_2-n_4-$nāni_5$	bīn- igw_1-i_2-$angw_5$
• Non-local		
3sprox→3obv	w- bīn -$ā_1$-an_9	bīn -$ā_1$-d_7
3pprox→3obv	w- bīn -$ā_1$-$wā_6$-an_9	bīn -$ā_1$-$wā_6$-d_7
3obv→3obv	w- bīn -$ā_1$-$wā_6$-an_9	bīn -$ā_1$-ini_6-d_7
3obv→3sprox	w- bīn -igw_1-i_2-an_9	bīn -igw_1-i_2-d_7
3obv→3pprox	w- bīn -igw_1-i_2-$wā_9$	bīn -igw_1-i_2-$wā_6$-d_7

[4] The forms in Walpole are *-i-angid(-wā)*.

[5] Independent forms with plural Actor additionally suffix *-an* in position 9.

inan→3sprox[6]	w-	bīn	-igw$_1$-i$_2$-n$_4$	bīn	-igw$_1$-i$_2$-d$_7$
inan→3pprox	w-	bīn	-igw$_1$-i$_2$-n$_4$-wā$_x$	n.a.	
• Local					
1s→2s	g-	bīn	-in$_1$-i$_2$	bīn	-inin$_1$-ān$_5$[7]
1s→2p	g-	bīn	-in$_1$-i$_2$-mw$_5$	bīn	-inin$_1$-agogw$_5$
1p→2s	g-	bīn	-igw$_1$-i$_2$[8]	bīn	-igw$_1$-i$_2$-an$_5$
1p→2p	g-	bīn	-igw$_1$-i$_2$-mw$_5$	bīn	-igw$_1$-i$_2$-ēgw$_5$
2s→1s	g-	bīn	-i$_1$	bīn	-i$_1$-an$_5$
2p→1s	g-	bīn	-i$_1$-mw$_5$	bīn	-i$_1$-ēgw$_5$
2→1p	g-	bīn-	-i$_1$-min$_5$[9]	bīn	-i$_1$-āng$_5$

3.5 Agentless form (TA: *bīn-* ‘bring’)

	Independent			Conjunct	
1s	n-	bīn	-igw$_1$-i$_2$	bīn	-igw$_1$-i$_2$-ān$_5$
1p	n-	bīn	-igw$_1$-i$_2$-min$_5$	bīn	-igw$_1$-i$_2$-āng$_5$
2s	g-	bīn	-igw$_1$-i$_2$	bīn	-igw$_1$-i$_2$-an$_5$
2p	g-	bīn	-igw$_1$-i$_2$-mw$_5$	bīn	-igw$_1$-i$_2$-ēgw$_5$
12	g-	bīn	-igw$_1$-i$_2$-min$_5$	bīn	-igw$_1$-i$_2$-angw$_5$
3sprox	Ø-	bīn	-ā$_1$-w$_7$	bīn	-ind
3pprox	Ø-	bīn	-ā$_1$-w$_7$-ag$_9$	bīn	-ind-wā$_6$
3obv	Ø-	bīn	-ā$_1$-w$_7$-an$_9$	n.a.	

[6] Inan→anim forms with plural A’s additionally suffix *-an* in position 9.

[7] 1s→2 forms in Walpole have *-in* instead of *-inin*.

[8] While Rhodes says that eastern dialects show the form *g-bīn-ini-min* (1976: 116), he gives forms “borrowed from another paradigm” *g-bīn-igw-i* ‘we$_e$ bring you$_s$’ and *g-bīn-igw-i-mw* ‘we$_e$ bring you$_p$’, with the inverse morpheme *-igw* (1976: 86). Cf. the conjunct forms.

[9] Rhodes (1976: 85) gives for this form the meaning ‘you$_{s/p}$ bring me’, but his explanations make it clear that it must be ‘you$_{s/p}$ bring us$_e$’ instead.

Appendix 2
Analysis of Kiowa personal prefixes

The following is a simplified account of Watkins & McKenzie's (1984) underlying representation for the Kiowa prefixes discussed in Chapter VI:

(1) KIOWA UNDERLYING PREFIX STRUCTURE (Watkins & McKenzie 1984:117)

a. Segmental:

Primary argument			Secondary argument	
Person	— Number	—	Number	— Number
C	V		V	C

b. Tonal:
- Non-agentive primary argument → high tone
- Agentive primary argument → usually low tone

The primary argument is marked first, and Type i prefixes distinguish number in the consonantal segment (*d* 1; *g* 2s; Ø 3s; *b* 2/3ns), unlike Type ii prefixes (*d* 1; *b* 2; Ø 3). The vowels expressing the number of the primary argument surface only if there is no secondary argument or if the latter is Ø-marked, with the exception of *e,* which surfaces in all cases: *ia* 3s(i), Ø 3s(ii); *e* 3d; *N* d, and *ɔ* else(i), *ia* else(ii) (*N* surfaces as nasalization of the whole prefix). Type i components appear in Set III prefixes, and those of Type ii in Sets I, II, and IV.

Table 2-1
KIOWA PRIMARY ARGUMENT CODING

	Type i	Type ii	
1s	d-ia	d-ia	sA implied
1ns	d-ɔ	—	XA implied
2s	g-ia	b-ia	sA implied
	g-ɔ	—	XA implied
2d	b-ǫ	b-ią	XA implied
2p	b-ɔ	b-ia	XA implied
3s	Ø-ia	Ø-Ø	sA implied
3d	b-ę	Ø-ę	XA implied
3p	—	Ø-ia	XA implied
3c	b-ɔ	Ø-e	XA implied

Watkins & McKenzie (1984: 117f)

Number of the secondary argument is encoded as follows: Ø s; *ę* d; *ia* p; *e* c (Set II), and *ɔ* (Sets III and IV). A slightly irregular non-singular *d* occurs at the end of many forms, however.

Watkins & McKenzie exemplify the composition of some prefixes as follows. Observe that some morphophonemic rules apply:

gyát- '2s:pIII'

underlying:	*g-ɔ́-ia-d-*	2s(i) *g-ɔ́*, *ia* p, *d* ns; high tone (non-agentive)
vowel truncation:	*giád-*	
glide formation:	*gyád-*	
final devoicing:	*gyát-*	

én-` '3d:pII'

underlying:	*Ø-ę́-ia-d-`*	3d(ii) *Ø-ę́*, *ia* p, *d* ns; low floating tone
vowel truncation:	*ę́d-`*	
dual nasalization:	*ę́n-`*	
surface:	*én-`*	

The reader should be aware that there is much more to be said about morphophonemic rules and exceptions to the generalizations stated above and should consult Watkins & McKenzie (1984: 115f) for further reference. By the same token, readers interested in the history of these formants and the relationship between them and their Tanoan counterparts should consult Watkins & McKenzie (1984: 127f).

Appendix 3
Optimality-theoretic syntax of inverses

Since the seminal studies by McCarthy (1993) and Prince & Smolensky (1993), optimality theory (OT) has been shown to be a theory of typological variation instead of merely a novel attractive approach to phonology. Its inspiration is basically formalist, but its applications to syntax range from rather functionalist (e.g. Aissen 1997, 1999, 2000) through mildly formalist (e.g. the studies in Archangeli & Langendoen 1997) to nearly minimalist (e.g. Kager 1999).

Although a thorough critique of the relevant optimality-theoretic studies cannot be undertaken here, I want to substantiate the claim made in Chapter VIII that the view of direction proposed in the present study is essentially compatible with an optimality-theoretic approach. Rather than specifically addressing some recent and fairly attractive accounts of case systems (Aissen 1999, 2000, Nakamura 1997, Woolford 1997, 2001), voice alternations (Ackema & Neeleman 1998, Sells 2001), and obviation (Aissen 1997) in this framework, I have preferred to refer to both a number of general issues and only two studies here: Legendre et al. (1993) and Aissen (1999).

At the heart of OT lies the idea that language is best seen as a system of conflicting forces, which are represented by constraints acting on a set of inputs in order to select optimal outputs. Moreover, the concept of markedness is also central—OT builds markedness "into grammars in the form of universal OUTPUT CONSTRAINTS which *directly* state marked or unmarked patterns" (Kager 1999: 3, emphasis in the original). A further hallmark of OT is its claim as to universality. In fact,

> the class of inputs and candidate sets is universal […]; likewise, the set of constraints is essentially universal. Consequently, the source of language-particular variation lies not in differences in the class of inputs, candidate sets, or constraints, but in the ranking of the constraints.
>
> (Aissen 1999: 685)

In other words, all languages share both input sets and constraints, but language-specific rankings of the latter will yield different optimal outputs, thereby giving rise to the observable cross-linguistic diversity. Let me now turn to how OT applies these general principles to the study of voice and case systems.

1. Some approaches to voice in OT

1.1 A first look: Legendre et al. (1993)

Typically, inputs consist of a predicate-argument structure with macroroles, discourse salience, and reference of each argument.[1] The candidates consist of a predicate and its arguments, each of which is associated with a set of morphosyntactic properties (i.e. features indicating person, case and/or grammatical function). Active and passive clauses are assumed to belong to the same candidate set and compete with one another. Although some of these categories are often taken to be discrete (like word classes), not much depends on this assumption here, and both inputs and candidates can be conceived as compatible with the notions used throughout this study.

Nevertheless, the notion of "grammatical function" is problematic if we do not want to postulate a priori universal grammatical relations, and a significant number of the purportedly universal constraints explicitly refer to concepts like "subject", "object", and "oblique". To my mind, one of the strengths of Legendre et al. (1993) is the fact that they work in terms of "abstract cases", notions they label C_1, C_2 (core) and C_4 (peripheral) and which are realized as what I have called coding properties of GRs in this study (p. 466).

Thus, and unlike more recent studies, I formulate both inputs / candidates and constraints in terms of macroroles (A > O), topicality relationships (X' > X") and grammatical relations (PA > SA > Obl) but state explicitly that the GRs are language-specific—for all accounts surveyed in this appendix.

(1) UNIVERSAL CONSTRAINTS (adapted from Legendre et al. 1993:466)

a. PA_A	b. SA_O	c. PA'	d. ∃SA
e. $*SA_A$	f. $*PA_O$	g. *PA/SA"	h. $*Obl_{A/O}$

The first four constraints in (1) are positive: actors are coded as primary arguments (a) and undergoers as secondary arguments (b), salient arguments are coded as primary arguments (c), and some argument is coded as secondary (d). The other four are negative: actors do not appear as secondary arguments (e), undergoers are not coded as primary arguments (f), non-salient arguments are not core arguments (g), and actors and undergoers do not appear as obliques.

[1] Working in a strongly formalist approach, Grimshaw (1997) defines the following inputs: (i) a lexical head plus its argument structure, (ii) an assignment of lexical heads to its arguments, and (iii) a specification of the associated tense and semantically meaningful auxiliaries. Cf. Nichols (2000) for an explicit link between direction marking and the Tense node.

Tableau 0 below illustrates how a particular ranking of these allegedly universal constraints yields the English voice alternation system.[2] In particular, it shows that passive voice is the most harmonic expression of an interaction involving a non-salient actor and a salient undergoer. Both the first and fourth candidates (a normal active clause and a "passive" clause where the undergoer is secondary argument and the actor oblique) violate the highest one, viz. the requirement that salient arguments be primary arguments. Since the second candidate (an active clause where the actor is SA and the undergoer PA) violates the constraint that penalizes non-salient core arguments, the most harmonic clause structure is the third candidate, which corresponds to the English passive (the actor is oblique and the undergoer is primary argument, i.e. subject). Although this structure violates the constraint requiring that some argument be coded as SA, the fact that this particular constraint appears further down renders the candidate more acceptable in comparison with its competitors.

Tableau 0: ENGLISH PASSIVE VOICE

(V,) A, O	PA_A	*PA/SA"	∃SA	$*SA_A$	…
PA"$_A$, SA'$_O$	*!	*			
PA'$_O$, SA"$_A$		*!		*	
☞ PA'$_O$, Obl"$_A$			*		
SA'$_O$, Obl"$_A$	*!				

adapted from Legendre et al. (1993: 469)

1.2 A second look, and splits: Aissen (1999)

Let me now turn to Aissen (1999), where systems analogous to the Tanoan ones are described in a similar manner. Her inventory of constraints is not the same as the one given in (1); the three prominence hierarchies in (2) are needed in order to account for the facts she discusses, viz. the voice alternations in (i) Fox (Algonquian) and Nocte (Tibeto-Burman), both inverse languages; (ii) Lushootseed, Lummi, and Squamish (Salish), with voice alternations sensitive to indexability hierarchies, and (iii) English, which shows neither phenomenon:

[2] OT tableaus include the following features: Constraints are ordered from left (more stringent) to right (less stringent), and those constraints not ranked relative to each other are separated by dotted lines. Inputs are given in the box to the upper left of the tableaus, possible outputs are listed from top to bottom in no particular order, and the optimal candidate is indicated by a pointing finger (☞). Violations to particular constraints are symbolized by an asterisk (*), fatal violations by an exclamation mark (!), and irrelevant constraints appear shaded.

(2) PROMINENCE HIERARCHIES

a. Indexability SAP > 3

b. Role A > O

c. GRs PA > nPA (= SA, Obl)

These hierarchies are the ones discussed in Chapter II (Aissen labels them "person scale", "role scale" and "relational scale" respectively). These three tiers of morphosyntactic and semantic representation correspond to the building blocks for the specification of harmonic and constraint alignments also in the optimality-theoretic account. Observe that the grammatical relations are primary argument (PA) and non-primary argument (nPA, which can be either secondary argument or oblique). Additionally, a pragmatic salience hierarchy according to which topical referents (') outrank nontopical ones (") is included. Thus, the purportedly universal alignments postulated between the three hierarchies are the ones summarized in Table 3-1 below. The constraint that penalizes undergoer primary arguments (*PA_O) appears in boldface and shall concern us further down.

Table 3-1
OT HIERARCHY ALIGNMENT[3]

	Harmonic alignment	Constraint alignment
A.	$PA_{SAP} > PA_3$	$*PA_3 \gg *PA_{SAP}$
B.	$nPA_3 > nPA_{SAP}$	$*nPA_{SAP} \gg *nPA_3$
C.	$PA_A > PA_O$	$\mathbf{*PA_O} \gg *PA_A$
D.	$SA_O > SA_A$	$*SA_A \gg *SA_O$
E.	PA' > PA"	*PA" >> *PA'
F.	nPA" > nPA'	*nPA' >> *nPA"

adapted from Aissen (1999: 681f)

Coast Salish voice alternations

Depending on the exact person configuration, the Coast Salish languages discussed here allow both active and passive, only passive, or only active clauses to express a particular state of affairs, as described in Jelinek & Demers (1983). Table 3-2 below summarizes the patterns (√ indicates that a particular clause type is available, and — that it is not).

[3] The connective > is to be interpreted as 'more harmonic than', and the expression *$X \gg *Y$ means '*X is a worse violation than *Y'.

Table 3-2
COAST SALISH VOICE ALTERNATIONS

	Lushootseed			Lummi			Squamish	
	active	passive		active	passive		active	passive
1→3	√	—		√	—		√	—
2→3	√	—		√	—		√	—
3→3	√	√		√	√		√	√
3→1	√	√		—	√		√	√
3→2	√	√		—	√		—	√
1→2	√	—		√	—		√	—
2→1	√	—		√	—		√	—

Aissen (1999: 690f), from Jelinek & Demers (1983)

In all three languages, SAP→3 and local interactions allow only active clauses, and non-local configurations allow both active and passive clauses. Nevertheless, 3→SAP interactions are treated differently in each language: Lushootseed shows both active and passive clauses, Lummi only passive ones, and Squamish allows both for '3→1' but only the passive for '3→2'.

Assuming that the basic principle governing the voice alternation in English is pragmatic salience,[4] Aissen arrives at the following language-specific rankings of the constraints given in Table 3-1 that explain voice alternation in the languages under discussion. Observe that some constraints appear in a more detailed version than the general one given above, e.g. specifying whether nPA refers to SA or OblA, or whether the SAP is a 1st or a 2nd person:

(3) CONSTRAINT RANKINGS I (adapted from Aissen 1999:695)

a. Fox ***PA$_O$** ≫ …
b. English *PA" ≫ ***PA$_O$** ≫ …
c. Lushootseed *Obl$_{SAP}$ ≫ *PA" ≫ ***PA$_O$** ≫ …
d. Lummi *Obl$_{SAP}$ ≫ *SA$_{SAP}$ ≫ *PA" ≫ ***PA$_O$** ≫ …
e. Squamish *Obl$_{SAP}$ ≫ *SA$_2$ ≫ *PA" ≫ ***PA$_O$** ≫ …

In Algonquian, *PA$_O$ outranks all other constraints—a fact that "accounts for the non-existence of passives" (Aissen 1999: 687) in the sense that, e.g., a 3→SAP configuration has to be expressed by an active clause (recall the view that inverses have to be transitive). English uses the passive construction when the undergoer is topical, and therefore the constraint *PA" must outrank *PA$_O$. In Lushootseed, topical undergoers may trigger the passive construction only if they are not 3rd person, something that is expressed here by the fact that the

[4] Cf. Aissen (1999: 687f) for some comments on the adequacy of this assumption.

constraint penalizing oblique SAPs outranks *PA", which in turn outranks *PA_O. Lummi adds to the restriction found in Lushootseed the condition that an SAP cannot be the secondary argument, thereby precluding the 3→SAP configurations from being expressed by active clauses. Squamish further distinguishes between 2nd and 1st person, with the constraint *SA_2 following *PA_O instead of preceding it. The following examples show how this works.

In Lummi, 3→1 interactions have to be expressed by a passive clause. The (d)-ranking in (3) above yields exactly this situation, as shown in Tableau 1 below. Since the constraint penalizing SAP secondary arguments outranks those penalizing nontopical or patientive primary arguments, the passive is allowed and the active is not.

Tableau 1: LUMMI 3→1 INTERACTIONS

(V,) 3A', 1O"	*Obl_{SAP}	*SA_{SAP}	*PA"	*PA_O
Active : PA'$_{3A}$, SA"$_{1O}$		*!		
☞ Passive: PA"$_{1O}$, Obl'$_{3A}$			*	*

adapted from Aissen (1999: 692)

By the same token, it is the active construction that is chosen with the 1→2 configurations, as seen in Tableau 2. The constraint penalizing SAP obliques outranks the one penalizing SAP secondary arguments, and so an active transitive clause is more harmonic than a passive one.

Tableau 2: LUMMI 1→2 INTERACTIONS

(V,) 1A", 2O"	*Obl_{SAP}	*SA_{SAP}	*PA"	*PA_O
☞ Active : PA"$_{1A}$, SA"$_{2O}$		*	*	
Passive: PA"$_{2O}$, Obl"$_{1A}$	*!		*	*

adapted from Aissen (1999: 693)

Dyirbal split ergativity

In order to account for a split ergativity case system like the one found in Dyirbal, two further constraints are introduced: (i) one penalizing the unmarkedness of morphological categories and (ii) one that "penalizes linguistic structure and is understood broadly to exclude features, nodes, etc." (Aissen 1999: 698); Aissen labels them *Ø and *STRUC respectively. The relevant marking in this context is nominal case, which will be denoted as a super-scripted *c* both for the constraints (e.g. *$Ø^c$) and the nominals when marked

(e.g. marked PA_{3A}^{c} as opposed to unmarked PA_{3A}). Note that what is to be explained here is not only the distribution of case marking but also the asymmetry between marked and unmarked forms:

Table 3-3
DYIRBAL CASE MARKING (SUMMARY)

	A	S	O
SAP	NOM (Ø)		ACC
3	ERG	ABS (Ø)	

The constraint ranking needed here is more elaborate than the ones mentioned so far. First, several individual constraints can be conjoined and form complex constraints (Aissen's "subhierarchies") of the form $(C_1 \wedge C_2 \wedge \ldots)$, where C_i represents an individual constraint. In addition, two or more constraints need not be ranked relative to each other, in which case the notation used here is $C_1 \mid C_2$. Thus, we arrive at the Dyirbal ranking shown in (4):

(4) DYIRBAL CONSTRAINT RANKING (adapted from Aissen 1999:701)

$\{(*Ø^{c} \wedge *PA_{3}) \mid (*Ø^{c} \wedge *SA_{SAP})\} \gg *STRUC^{c} \gg \{(*Ø^{c} \wedge *PA_{SAP}) \mid (*Ø^{c} \wedge *SA_{3})\}$

Tableau 3 below shows how this ranking works with a 1→3 interaction. Neither of the top two constraints is applicable because no candidate has a 3rd person subject or a SAP secondary argument, and therefore no constraint conjunction is violated. $*STRUC^{c}$ penalizes the marking of case, and is violated once by those candidates that include case marking for one of their arguments and twice by the candidate that marks both. The most harmonic solution is to leave both arguments unmarked—precisely the strategy we find in Dyirbal: an unmarked nominative for SAPs and an unmarked absolutive for 3rd persons.

Tableau 3: DYIRBAL 1→3 INTERACTION

(V,) 1A, 3O	$*Ø^{c} \wedge *PA_{3}$	$*Ø^{c} \wedge *SA_{SAP}$	$*STRUC^{c}$	$*Ø^{c} \wedge *PA_{SAP}$	$*Ø^{c} \wedge *SA_{3}$
PA_{1A}^{c}, SA_{3O}			*!		*
PA_{1A}, SA_{3O}^{c}			*!	*	
☞PA_{1A}, SA_{3O}				*	*
PA_{1A}^{c}, SA_{3O}^{c}			*!*		

adapted from Aissen (1999 : 701)

Conversely, with a 3→1 configuration it is the marked ergative for the 3rd person and the marked accusative for the SAP that is chosen. The conjoined constraint (*$Ø^c$ ∧ *PA_3) penalizes an unmarked 3rd person primary argument while the conjoined constraint (*$Ø^c$ ∧ *SA_{SAP}) penalizes an unmarked SAP secondary argument, so the candidates that include one of these are not optimal. The third candidate violates both conjoined constraints, and therefore the fourth candidate is the most harmonic one, although it violates *$STRUC^c$ twice:

Tableau 4: DYIRBAL 3→1 INTERACTION

(V,) 3A, 1O	*$Ø^c$ ∧ *PA_3	*$Ø^c$ ∧ *SA_{SAP}	*$STRUC^c$	*$Ø^c$ ∧ *PA_{SAP}	*$Ø^c$ ∧ *SA_3
$PA_{3A}{}^c$, SA_{1O}		*!	*		
PA_{3A}, $SA_{1O}{}^c$	*!		*		
PA_{3A}, SA_{1O}	*!	*			
☞$PA_{3A}{}^c$, $SA_{1O}{}^c$			**		

adapted from Aissen (1999: 702)

Inverse

The inverse system addressed by Aissen (1999) is that of Nocte. Unmarked direct ($Ø^d$) and marked inverse clauses ($STRUC^d$) are distributed as follows:

(5) NOCTE DISTRIBUTION OF DIRECT AND INVERSE

a. Direct: 1/2/3→3, 1→2

b. Inverse: 3→1/2, 2→1

Now consider the (a)-ranking in (6), which is postulated as universal. As far as simple transitive clauses expressing particular person configurations are concerned, this ranking penalizes 3→SAP interactions more stringently than SAP→3 configurations, and both non-local and local scenarios are in between. Including formal markedness conditions in a straightforward manner, the ranking in (b) obtains; the more semantically marked the construction, the more strongly preferred is a formally marked expression.

(6) UNIVERSAL RANKINGS (adapted from Aissen 1999:707)

a. (*PA_3 ∧ *SA_{SAP}) ≫ {(*PA_3 ∧ *SA_3) | (*PA_{SAP} ∧ *SA_{SAP})} ≫ (*PA_{SAP} ∧ *SA_3)

b. (*$Ø^d$ ∧ *PA_3 ∧ *SA_{SAP}) ≫ {(*$Ø^d$ ∧ *PA_3 ∧ *SA_3) | (*$Ø^d$ ∧ *PA_{SAP} ∧ *SA_{SAP})} ≫ (*$Ø^d$ ∧ *PA_{SAP} ∧ *SA_3)

In fact, individual languages differ precisely as to where they place the formal marking constraints of direction *$Ø^d$ and *$STRUC^d$. For Nocte, an additional specification taking the local ranking 1 > 2 into account has to be made in order to arrive at the following ranking:

(7) NOCTE RANKING (adapted from Aissen 1999:707)

$\{(*Ø^d \wedge *PA_3 \wedge *SA_{SAP}) \mid (*Ø^d \wedge *PA_2 \wedge *SA_1)\} \gg *STRUC^d$

This ranking means that formally unmarked clauses expressing 3→SAP and 2→1 interactions are penalized more strongly than marked ones, and therefore inverse verbs are formally marked and direct ones are not.

1.3 Extensions

An OT framework has been recently applied to differential object marking (Aissen 2000). Including the hierarchies given in (8) below helps define "object prominence" in order to take into account the fact that in some languages a given kind of object marking is obligatorily or optionally reserved for prominent objects (here, prominent secondary arguments).

(8) FURTHER HIERARCHIES

a. Animacy: human > animate > inanimate

b. Definiteness: personal pronoun > proper noun > definite NP > indefinite specific NP > non-specific NP

The (b)-hierarchy in (8) is a combination of several subhierarchies, most of which are mentioned in Section 3 of Chapter I: anaphoricity (pronoun > NP), NP (proper > common), definiteness proper (definite > indefinite) and specificity (specific > non-specific).

Let me briefly outline here how complex constraints that integrate the hierarchies in (8) may work so as to yield the correct outputs found in individual languages. For instance, the fact that an indefinite but specific undergoer is not case-marked in Hebrew can be represented as in Tableau 5 below. An undergoer marked for accusative case fatally violates *$STRUC^c$, which outranks e.g. ($*Ø^c \wedge *SA_{spec}$), a complex constraint that penalizes unmarked specific secondary arguments.

Tableau 5: HEBREW UNMARKED UNDERGOER

$O_{indef,spec}$	$*Ø^c \wedge *SA_{def}$	$*STRUC^c$	$*Ø^c \wedge *SA_{spec}$	$*Ø^c \wedge *SA_{nspec}$
O^c		*!		
☞ O			*	*

adapted from Aissen (2000)

By the same token, Turkish marks an undergoer under the same circumstances because the constraint ranking is different, as seen in Tableau 6. Since here ($*Ø^c \wedge *SA_{spec}$) outranks $*STRUC^c$, the candidate marked for accusative case is more harmonic than the unmarked one.

Tableau 6: TURKISH MARKED UNDERGOER

$O_{indef,spec}$	$*Ø^c \wedge *SA_{def}$	$*Ø^c \wedge *SA_{spec}$	$*STRUC^c$	$*Ø^c \wedge *SA_{nspec}$
☞ O^c			*	
O		*!		*

adapted from Aissen (2000)

Analogously, differential object marking strategies based on animacy rather than definiteness, or on both animacy and definiteness, can be elegantly accommodated in such optimality-theoretic accounts. The interested reader is referred to Aissen (2000) for more details and for comments on Persian, Romanian, Catalan, Spanish, and some Australian languages.

2. A brief critique

There are some problems with the accounts just outlined, some of which were noted by Aissen herself in her 1999 article. First, both a conjunction of the type ($*Ø \wedge *X$) and a conjunction of the type ($*STRUC \wedge *X$) are possible in principle, although only the first makes sense in order to penalize semantically marked structures that are formally unmarked. With regard to the account of Dyirbal split ergativity, intransitive clauses are incorrectly described with the tools mentioned so far. Moreover, the adequacy of the universal notions of subject and object is far from obvious—especially so in Dyirbal, where some behavioral properties are known to show an S/O, rather than an S/A, pivot.

The above account of Dyirbal case elegantly explains why the distribution of marked and unmarked forms in transitive clauses is as it is, but it does not explain the split. The complex constraint ($*Ø \wedge *PA_3$) poses a problem since it

applies regardless of whether there is a secondary argument in the clause or not. In other words, the analysis predicts marked 3rd person primary arguments in both transitive and intransitive clauses. This prediction, as already mentioned, is falsified by the data. Aissen suggests that the solution needs "a more systemic view of case marking, one which can formally express the functional motivation for case marking" (1999: 703) because the functional motivation to formally distinguish primary and secondary arguments arises only in transitive clauses.

Except for Legendre et al. (1993) and other infrequent examples not discussed here, optimality-theoretic studies tend to utilize the notions "subject" and "object" without further qualification. This is not necessarily a problem if the elements are regarded as language-specific, but it is problematic if inputs, candidates, and constraints are considered universal, as I mentioned at the beginning of Chapter I. The terminology used in this appendix has deliberately obscured this fact because, to my mind, a stronger case can be made for notions like primary and secondary argument than for subject and object in an OT context. The difference is not merely terminological: while the traditional labels usually imply some kind of prototype definition or universal characterization with some sort of language-specific parametrization and instantiation, the terms I have preferred here are not only language-specific but also construction-specific, at least in principle. (Recall from Chapter I that "subject" is a special case of "primary argument".)

A further problem bears relation to the account of the Nocte inverse system. Aissen acknowledges that it does not explain the Fox system (more generally, the Algonquian systems), where both direct and inverse predicates are segmentally marked. In addition, it only addresses the choice between a direct and an inverse clause, not between an active and a passive one. More refined analyses along the lines of Sells's (2001) account of Cebuano clause types are probably on the right track in that they attempt to explain the overall make-up of a voice system rather than the choice of individual constructions in particular cases. By the same token, it is likely that the binary pragmatic opposition topical versus nontopical is insufficient. I believe that further research in this area will be highly valuable.

Despite these shortcomings, several features of the OT accounts are appealing. As seen in (3) above, the gradual syntacticization of the inverse can be explained as the gradual loss of stringency of the constraint *PA_O, which penalizes undergoer primary arguments. Markedness conditions can be included in a natural way. The OT framework is flexible and general enough to accommodate many valuable insights gained from descriptive studies. In particular, the fact that some languages disprefer nontopical primary arguments low in animacy can be accounted for in a principled manner, as can the fact that languages differ with regard to how stringent these general constraints are.

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Abbreviations used:

BLS	Proceedings of the Annual Meeting of the Berkeley Linguistics Society
CSLI	Center for the Study of Language and Information
CUP	Cambridge University Press
IJAL	*International Journal of American Linguistics*
LTBA	*Linguistics of the Tibeto-Burman Area*
NLLT	*Natural Language and Linguistic Theory*
RLTA	*Revista de Lingüística Teórica y Aplicada*
UCP	The University of Chicago Press

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